EXHIBIT 50

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                   UNITED STATES DISTRICT COURT
                   FOR THE DISTRICT OF VERMONT
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    JAMES D. SULLIVAN, et al.,
 4
    Individually and on behalf of )
    a Class of persons similarly )
5
    situated,
                Plaintiffs,
                                   )
 6
                                   ) CIVIL ACTION NO.
                                   ) 5:16-cv-00125
            V.
7
    SAINT-GOBAIN PERFORMANCE
8
    PLASTICS CORPORATION,
                Defendant.
9
10
11
12
                   VIDEO-RECORDED DEPOSITION
                              - of -
13
                         DAVID K. MEARS
14
15
16
         taken on behalf of the Defendant on Monday,
         September 24, 2018, at the offices of Biggam
17
         Fox Skinner LLP, 453 Stone Cutters Way,
         Montpelier, Vermont, commencing at 8:58 AM.
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20
                   VIDEOGRAPHER: MARY DOUD
           COURT REPORTER: JOHANNA MASSÉ, RMR, CRR
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STIPULATIONS

IT IS HEREBY STIPULATED AND AGREED

by and between Counsel for the respective parties that
this deposition is being taken in accordance with the
Federal Rules of Civil Procedure; that all objections
except as to form are reserved until the time of trial;
that all objections as to Notice of this deposition are
hereby waived; and that the witness has reserved the
right to read and sign the deposition transcript.

* * *

MONDAY, SEPTEMBER 24, 2018

8:58 AM

THE VIDEOGRAPHER: Good morning. We're on the record at 8:58 AM, September 24th, 2018. Please note that the microphones are sensitive and may pick up whispering, private conversations, and cell interference.

This is media unit number 1 of the video-recorded deposition of David Kruger Mears taken by counsel for the defendant in the matter of James D. Sullivan vs. Saint-Gobain Performance Plastics filed in the U.S. District Court, District of Vermont, Civil Action No. 5:16-cv-00125. This deposition is being held at Biggam Fox Skinner, 453 Stone Cutters Way,

Page 6 1 Montpelier, Vermont. 2 My name is Mary Doud from the firm Veritext, and I'm the videographer. Court reporter is Johanna 3 Massé from Veritext. Okay. I'm not related to any 4 5 party in this action, nor am I financially interested 6 in the outcome. 7 Counsel and all present in the room and 8 everyone attending remotely will now state their 9 appearances and affiliations for the record. If there 10 are any objections to proceeding, please state them at 11 the time of your appearance beginning with the noticing 12 attorney. 13 MR. WEINRAUB: Good morning. This is David 14 Weinraub from Dechert LLP on behalf of the defendant, 15 Saint-Gobain. 16 MS. JOSELSON: Emily Joselson, Langrock, 17 Sperry & Wool, on behalf of the plaintiffs. 18 THE VIDEOGRAPHER: Will the court reporter 19 please swear in the witness. Thank you. We may 20 proceed. 21 (The witness was sworn.) 22 THE REPORTER: Counsel, usual stips okay? 23 MR. WEINRAUB: Yes. 24 MS. JOSELSON: Yes. THE REPORTER: Thank you. 25

	Page 7
1	DAVID K. MEARS,
2	having been first duly sworn, testified as follows:
3	EXAMINATION
4	BY MR. WEINRAUB:
5	Q. Good morning, Mr. Mears.
6	A. Good morning.
7	Q. Have you ever given a deposition before?
8	A. I have not.
9	Q. Okay. Have you ever taken depositions before
10	as an attorney?
11	A. Yes.
12	Q. Okay. So you're on the other side of the
13	table, as it were. Are you generally familiar with
L 4	the with the ground rules for how depositions
15	proceed?
16	A. Yes.
17	Q. And in what jurisdictions have you taken
18	depositions as an attorney?
19	A. Generally I have taken depositions in Texas,
20	in Washington state, and Vermont. I have also during
21	my time as an attorney for the U.S. Department of
22	Justice taken depositions in Florida and New Jersey and
23	Massachusetts. There may be others that I just can't
24	recall.
25	Q. Okay. Fair enough. Let's go ahead and mark

	Page 8
1	your expert report.
2	(Deposition Exhibit No. 1 was
3	marked for identification.)
4	BY MR. WEINRAUB:
5	Q. Now, the document that's been marked as
6	Exhibit 1, is this the expert report that you've
7	submitted in this case?
8	A. It is.
9	Q. And is your CV attached to the exhibit?
10	A. Yes.
11	Q. Okay. Could you turn to your CV, please.
12	And under the heading "Experience," your CV
13	lists your professional experience beginning with your
14	job with the Texas Water Commission in February 1987;
15	is that correct?
16	A. Correct.
17	Q. And is this a current, accurate list of your
18	professional positions?
19	A. It's not up-to-date. I have just recently,
20	starting on September 5th, taken a position with the
21	National Audubon Society as the director of the Audubon
22	Vermont office.
23	Q. Is that a full-time position?
24	A. It is.
25	Q. So I take it you are no longer employed by

Page 9 Vermont Law School. Is that correct? 1 2 Α. Correct. And could you describe just in general terms 3 Q. 4 the circumstances of your departure from Vermont Law 5 School. I resigned from the law school at the end of 6 7 June of this year to pursue other opportunities. In connection with any of the positions listed 8 Q. 9 on your CV, did you ever address issues related to 10 PFOA? 11 In a tangential way. When I taught a 12 course on hazardous and toxic substances last fall, we 13 discussed the situation in North Bennington as part of 14 my classroom discussions. 15 Approximately how many classroom discussions 16 did you have that touched on the topic of PFOA? 17 Α. It would have been a portion of one class. 18 Ο. Did you distribute any printed material in 19 connection with that course that addressed PFOA? 20 But I did distribute the -- or asked the Α. 21 students to review electronic versions of news articles 22 related to PFOA. 23 Do you recall any particular news articles 0. 24 that you asked the students to review? 25 Α. I do. One was an article from the New York --

Page 10 1 I believe it was New York Times Magazine about Rob Bilott, and the other was a series of articles in 2 3 VTDigger called something along the lines of "Teflon Town." 4 5 Ο. You were commissioner of the Vermont Department of Environmental Conservation for a period 6 of time; is that correct? 7 8 Α. Correct. And that was during December 2011 to July 9 Ο. 2015? 10 11 Correct. Α. 12 So I take it that you did not specifically Q. 13 address any PFOA issues during your time with Vermont DEC? 14 15 Α. Correct. 16 Were you personally involved in any 17 enforcement proceedings during your time at Vermont 18 DEC? 19 Α. Yes. 20 Q. Approximately how many? 21 It's hard to give a specific answer because I 22 had varying levels of involvement with enforcement actions while I was there. Partic- -- encouraging the 23 24 enforcement program was one of my priorities, but in 25 terms of kind of personal involvement, I would say it

Page 11 was probably fewer than a half dozen. 1 2 And could you generally describe what those fewer than half dozen enforcement actions consisted of 3 4 in general terms? 5 In general they involved a couple of cases where there were substantial violations and substantial 6 7 penalties or referrals to the Attorney General's 8 Office, or they involved particularly thorny policy or 9 legal questions. 10 And is it fair to say that it was the 11 substantiality of those violations and the thorniness 12 of the policy and legal questions that warranted elevating it to the level where the director was 13 14 personally involved with those proceedings? 15 MS. JOSELSON: Object to the form. 16 But you can answer. 17 Α. Yes. 18 Q. You mentioned also being involved in 19 encouraging enforcement actions. Could you describe 20 what -- what you mean by that. 21 The -- there were many processes in the 22

A. The -- there were many processes in the department, including in the enforcement program, that I wanted to improve the efficiency and effectiveness of the programs, and I also wanted it to be clear to the staff and to the leadership of that program that there

23

24

was -- that they were independent of any concerns about political pressure. I saw it as one of my roles to make sure that they had unimpeded ability to make decisions about the enforcement work that they were doing.

- Q. Did you feel that prior to your taking on the commissioner role, that political pressure within the department had been a problem?
- A. Anec- -- I had no personal or direct knowledge of that, but anecdotally and from staff accounts, there had been occasions in which pressure from governors or secretaries of the agency or in some cases legislators had interfered with the enforcement actions.
- Q. And referring to those anecdotes that you had heard about during that time frame, do you recall what any of the companies involved were?
- A. I don't recall specifics. I do recall that there was a reference to a ski area case, a reference to IBM. Beyond that I can't -- and maybe Husky, but I can't -- I can't recall specifics of those particular cases.
- Q. Okay. During your time with Vermont DEC, did you focus on any particular regulatory programs more than others, or would you say you were evenly distributed across all regulatory programs? Or however

Page 13 1 you would like to describe it. 2 I would say that I spent the most significant amount of my time on clean water issues involving Lake 3 4 Champlain, but not dramatically so. I -- I worked 5 fairly broadly across all of the various programs. 6 Did you do any work in connection with 7 Vermont's air toxics program? 8 I'm not recalling any specific project or Α. 9 issue that I worked on related to air toxics off the 10 top of my head, but I definitely worked with that team 11 of folks and with the air program generally. And who were the members of the air program 12 0. 13 during your time at Vermont DEC? 14 The director was Dick Valentinetti of the --Α. 15 what became then known as the Air and Climate division; 16 and following Dick Valentinetti, Elaine O'Grady was the 17 director. And there was -- of course, that was a large 18 division, so there were quite a number of folks. 19 Did you interact with the secretary of Q. 20 Vermont's Agency for Natural Resources during your time at Vermont DEC? 21 22 Α. Daily, yes. 23 And who was the ANR secretary during that 0. 24 time?

Α.

Deb Markowitz.

- Q. Did you ever discuss any air toxics issues with Deb Markowitz during your time with Vermont DEC?
- A. Not that I recall. But I'm remembering -there was an issue involving a distillery, and this
 isn't a classic air toxics issue, but there was an
 issue of the ethanol that escapes from the barrels at
 distilleries that have -- can have the effect of
 fostering a toxic kind of mold that can grow around
 those facilities, so not exactly air toxics, but just
 to amend my prior answer. But in terms of Secretary
 Markowitz, I don't recall specifically discussing air
 toxics issues with her.
- Q. Did you interact with any toxicologists at -- within ANR during your time at Vermont DEC?
- A. Not that I recall. We relied on the state toxicologist at the Department of Health primarily for issues related to toxics.
- Q. And you -- you perfectly anticipated my next question, which is, Did you interact with any toxicologists within the state Department of Health?
 - A. Yes.
 - Q. And for what general purposes?
- A. For generally tackling issues of are -- were we doing enough to deal with known contaminants, known toxics, as well as emerging toxics. It covered quite a

Page 15 broad number of chemicals and issues. 1 2 And did those discussions with the Department of Health toxicologist encompass varying regulatory 3 programs, water, air, or otherwise? 4 5 Primarily drinking water, some surface water. I'm not recalling a discussion about air toxics in 6 7 particular, but that doesn't mean that we didn't have 8 those discussions. I just can't recall them. 9 0. Fair enough. Do you recall the names of any 10 Department of Health toxicologists that you worked 11 with? 12 The one that I worked with initially was Bill 13 Bress, who had been there, of course, quite a long 14 time, was very well respected. I'm -- there was 15 another toxicologist we worked with after he left, but 16 I cannot recall her name off the top of my head. She 17 was also quite impressive. 18 Q. Have you ever been retained as an expert 19 witness in any cases besides this one? 20 Α. No. Within the scope of this litigation, what do 21 22 you consider to be your field or fields of expertise? 23 Environmental law and policy with a particular Α. 24 focus on pollution laws and pollution control policy.

Are you an expert in environmental

Q.

Page 16 1 engineering? 2 Α. No. Who retained you as an expert in this case? 3 Q. The attorneys for the plaintiffs. 4 Α. 5 0. And when were you retained? I can't remember the precise date, but it was 6 Α. 7 in the -- the late spring, early summer, May or June, 8 of 2018. 9 And what were you asked to do, or what was the 10 scope of your retention? 11 I was asked to review an expert report that 12 had been filed by Felix Flechas and to provide an 13 opinion in response to that. 14 And turning back to Exhibit 1, which is your Q. 15 expert report, is this the report that you prepared in 16 response to Mr. Flechas' report? 17 Α. Yes. And did you draft this report yourself? 18 19 I did draft it in collaboration with the Α. 20 attorneys for the plaintiffs. 21 Have you prepared any other reports in this 22 case besides what's been marked as Exhibit 1? 23 Α. No. 24 Are all of your opinions that you intend to 25 offer in this case set forth in the report?

A. Yes.

- Q. Have you been asked to do any work in this case that is not reflected in the report?
 - A. No.
- Q. And are all the materials that you relied on in forming your opinions, are they referenced in your report?
 - A. Yes.
- Q. Did you consider any additional materials that you did not rely on and that are not referenced in the report?
 - A. I'm sorry. I didn't understand the question.
- Q. Yeah. It wasn't a very good question. Other than the materials that you identified in -- in your report as materials that you relied on, did you consider any additional materials?
- A. I'm not sure what you mean by "consider." I mean, I certainly have -- you know, through the course of my work and experience working on pollution issues and toxics, I have a whole set of contexts that inform my opinion. I also have been paying attention to the unfolding issues in North Bennington over the past several years, so that backdrop and context was all information that informed my opinion, but I can't think of any specific materials or information that I

Page 18 1 considered outside of the scope of the information 2 provided to me by the plaintiffs and -- and Mr. 3 Flechas' report and Dr. Hopke's report. 4 0. Have you ever resided in Bennington, Vermont? 5 Α. I have not. Ever resided in North Bennington? 6 Q. 7 Α. No. 8 Q. Have you ever worked in either Bennington or 9 North Bennington? 10 I've never had a position of employment 11 where -- where it was located in those places. 12 Have you ever personally consumed drinking 13 water in Bennington or North Bennington? 14 Probably. I can't recall, but I've certainly Α. 15 been to restaurants and people's homes in the 16 community. 17 0. Okay. Was there ever a period of time where 18 you were regularly consuming drinking water in 19 Bennington or North Bennington? 20 Α. No. Sitting here today, is there anything 21 22 in your expert report that you want to correct or 23 supplement? 24 I do want to -- well, I think I've already 25 referenced the fact that I now have a different

Page 19 position than is reflected in my CV, but beyond that, 1 2 no. So other than updating your employment 3 Q. 4 history, there are no other changes to your -- your 5 prior employment history? Α. Correct. 6 7 And no changes to the -- to the opinions that Q. 8 you're offering? 9 Α. Correct. 10 Q. Okay. Have you ever met Dr. Hopke? 11 I have not. Α. 12 0. Have you ever spoken with him by phone or e-mail or otherwise? 13 14 Α. No. 15 To your knowledge, did Dr. Hopke review your 0. 16 report before it was finalized? 17 Α. I don't believe that he did. He may have, but I don't think so. 18 19 Have you discussed your work in this case with 20 anyone other than plaintiffs' counsel? 21 Α. No. 22 Since leaving your position as director of Q. 23 Vermont DEC, have you stayed in contact with any of 24 your former colleagues there? 25 Α. Yes.

- Q. And which colleagues have you stayed in touch with?
- A. Many of them. Some who have left. Alyssa Schuren is a -- is a friend and colleague. Trey Martin is a friend and colleague. I interact with Matt Chapman fairly frequently at bar events and bump into John Schmeltzer once in a while at cross country races. And then I go to social events where many of those folks are present, but those are the folks I can think of that may have had something or anything to do with the North Bennington issues.
- Q. Have you ever discussed PFOA issues with any of your former DEC colleagues?
 - A. Yes.

- Q. On approximately how many occasions?
- A. Maybe a dozen.
- Q. And which of the colleagues that -- that you've listed that you keep in touch with have you discussed PFOA with?
 - A. All of them.
- Q. And over what time period did you have those discussions?
- A. The last -- really since the information emerged about the contamination, which I can't recall the precise dates, but it seems to me it's been at

least two years.

- Q. What was the sum and substance of those conversations?
- A. I can't recall the specifics. I mean, generally it -- it is one of the most significant environmental issues and contam- -- groundwater contamination issues in the state for many years, so would typically ask for an update. You know, not that they had any obligation to tell me anything, but, you know, just out of curiosity, like what's the latest?

So I might get an update from John about -John Schmeltzer about his last visit and what they had
learned in terms of monitoring, or I might learn from
Alyssa when she was at the department what their latest
efforts were to do outreach to the community, or from
Matt I might have heard about the latest procedural
steps in the negotiation -- or the litigation between
the State and Saint-Gobain. It was all general.
Nothing specific.

- Q. Did any of these conversations occur after you were retained as an expert in this case earlier this year?
- A. Not that I can recall, but I couldn't swear to that. But if there were conversations, they were at a general level.

Q. As best as you can recall, have you told any of these folks that you've been retained as an expert in this case?

A. I think I've mentioned it to Matt Chapman.

I'm not certain.

Q. And do you recall anything that Matt Chapman

- may have said in response?A. No. It wasn't a substantive conversation, if
- Q. During any of these conversations, did any of these individuals say anything on the subject of ChemFab's or Saint-Gobain's regulatory compliance during the period that they were operating plants in

MS. JOSELSON: Object to the form.

But you can answer.

Bennington and North Bennington?

- A. No. I can't recall talking about anything that's kind of the substance of this in terms of the history of ChemFab's interactions with the State. It was mostly about what's -- what have we learned recently about the science of the site, the hydrogeology, the -- the communications with the community, and of looking forward what are the -- the solutions.
 - Q. Have you had any written communications with

we had it.

Page 23 1 any of these folks regarding PFOA issues? 2 Α. No. We've discussed Dr. Hopke. Have you had any 3 Q. conversations with any other plaintiffs' experts in 4 5 this case? 6 Α. No. 7 And have you discussed PFOA issues with any Q. current or former residents of Bennington or North 8 9 Bennington? 10 Α. Yes. 11 And which residents have you had conversations Ο. 12 with? 13 I don't recall their names. 14 Do you recall approximately how many 15 conversations? 16 It would have been a relatively short burst of 17 conversations that happened while I was -- maybe in 18 2015 or '16. Right -- right when the first information 19 came out about the groundwater contamination, I was at 20 the time the head of the Environmental and Natural Resources Law Clinic at Vermont Law School, and we were 21 22 working with the Toxics Action Center in arranging for 23 some community meetings with residents and citizens of 24 North Bennington, and we had two kind of meetings that 25 I recall that would have been in people's living rooms.

- Q. And what were the sum and substance of those living room conversations?
- A. They were simply explaining to them the nature of the -- the legal framework, the regulatory system around the pollution laws and what their -- what was likely to happen in terms of the regulatory process and what their opportunities to engage in that process would be.
- Q. And was there a particular regulatory process that you discussed during those conversations?
- A. At that time -- it's a little fuzzy, but my recollection is at the time the State had begun to have a set of public meetings and was inviting the public to weigh in and -- with their concerns and also to -- to share what the State was planning to do. So my recollection is that it would have been fairly general that I would have been explaining the way the Hazardous Waste Cleanup Program worked, how decisions were made under that program, and also how the enforcement program generally worked and their opportunities to weigh in on that. Again, it's -- enough years have gone by now, I can't -- can't remember the details.
- Q. And apart from the two living room conversations, did you attend any public meetings on PFOA issues?

Page 25 1 Α. I did not. 2 Q. Were you involved in arranging any of those 3 meetings? Α. The public meetings? 4 5 0. Yes. 6 Α. No. 7 So if you'll turn to your report, at the very Q. 8 bottom of page 2 and then carrying over to top of page 9 So the carry-over sentence that begins at the end 10 of page 2 states, I agree with and adopt Dr. Hopke's 11 opinions concerning defendant's violations of Vermont 12 air pollution regulations and rely upon the documents 13 he relied upon. 14 Do you see that? 15 Α. I do. 16 How did you determine which documents Dr. 17 Hopke relied on in connection with his regulatory 18 opinions as opposed to his opinions on other issues? 19 I read his report, and I was also given access Α. 20 to the documents that he cited. 21 Did you personally identify which documents 22 related to regulatory issues as opposed to other 23 issues? 24 Α. I don't recall making that distinction in my 25 review. There was quite a lot of documents, and I read

	Page 26
1	as many of them as I could.
2	Q. And are you aware that Dr. Hopke has issued
3	more than one report in this case?
4	A. I have seen reference to other reports, though
5	I have not reviewed them.
6	Q. Did you read just one of his reports?
7	A. Yes.
8	MR. WEINRAUB: Could we mark this one as
9	Exhibit 2.
10	(Deposition Exhibit No. 2 was
11	marked for identification.)
12	BY MR. WEINRAUB:
13	Q. And do you recognize the document that's been
14	marked as Exhibit 2?
15	A. Yes, I do.
16	Q. Is this the report that of Dr. Hopke's that
17	you reviewed in connection with your report?
18	A. Yes.
19	Q. And did you adopt all of Dr. Hopke's opinions
20	stated in this report?
21	A. Yes.
22	Q. Are there any statements in this report by Dr.
23	Hopke that you disagree with?
24	A. No. There there is one characterization
25	that I can't recall off the top of my head that I

thought he might have had -- there was a memo that he referenced that I thought he might have misunderstood who had been the origin of the memo. It was a phone -- phone memo from Chris Jones to somebody, and I think in Dr. Hopke's report he referenced it as though it was coming from the -- the person at ChemFab that Mr. Jones had spoken to when I think in fact it was Mr. Jones describing his conversation. So it was a small error, but other than that, I didn't see anything that I disagreed with or had questions about.

- Q. In your report did you rely on any documents beyond those that Dr. Hopke relied on in his report?
 - A. No.

- Q. Do you know how Dr. Hopke determined which documents to rely upon in preparing his report?
 - A. I do not.
- Q. Do you know who provided Dr. Hopke with those documents?
 - A. I do not.
- Q. Do you know whether Dr. Hopke did any independent literature review or document review of his own before selecting those documents?
- A. I have the impression from the compilation that he did of citizen complaints that he had done some independent investigation, but I'm not certain.

Page 28 1 Have you yourself done any independent 2 literature or document review in connection with your report? 3 4 Α. No. 5 MR. WEINRAUB: Can we mark this one as Exhibit 3, please. 6 7 (Deposition Exhibit No. 3 was 8 marked for identification.) 9 BY MR. WEINRAUB: 10 Do you recognize the document marked as Q. Exhibit 3? 11 12 Α. I do. 13 Is this your billing records in this case Q. 14 through August 30 of 2018? 15 Α. Yes. 16 And do you recognize this as a document that was produced to us in connection with a subpoena? 17 18 Α. Yes. 19 At the top the document refers to a billing 20 rate of \$400 per hour. Do you see that? 21 Α. Yes. And is that in fact your billing rate in this 22 Q. 23 case? 24 Α. Yes. 25 Q. Do you charge any different rate for

Page 29 1 testifying at today's deposition? 2 Α. No. Should you testify at trial, do you expect to 3 Q. 4 charge a different rate for trial testimony? 5 Α. No. Does this document accurately summarize your 6 Ο. 7 work on this case through August 30 of 2018? 8 Α. Yes. 9 And have you done additional work on this case 10 since August 30 of 2018? 11 Α. Yes. 12 0. And approximately how many hours, as best as 13 you can estimate? 14 Α. Somewhere between another six or eight hours. 15 And was that in preparation for today's 0. 16 deposition? 17 Α. Yes. Did you do any work after August 30 other than 18 Q. 19 preparing for today's deposition? 20 Α. Not that I recall. 21 In general terms, what did you do to prepare 22 for the deposition? 23 Mostly I just read through the documents a Α. 24 second time, reading -- read through the various 25 reports and going back to the underlying source

Page 30 1 documents. 2 Other than any discussion with plaintiffs' counsel, have you had any discussions with anyone else 3 in preparation for your deposition today? 4 5 Α. No. Exhibit 3 includes one entry dated July 16 of 6 Ο. one hour spent "Reviewing new July 2018 DEC report on 7 8 PFAS sampling." Do you see that? 9 I do. Α. 10 Q. Why did you review that report? 11 Counsel for plaintiffs e-mailed it, I believe 12 to a number of the experts, and so I took the time to 13 read it. 14 Does that report have any particular 15 significance to your opinions in this case? 16 Α. No. 17 Q. Switching topics, I'd like to discuss the Clean Air Act at a sort of Clean Air Act 101 level to 18 19 make sure I understand in general how the system works. 20 Am I correct that the Clean Air Act 21 establishes various regulatory programs? 22 Α. Yes. 23 And one category of those programs involves 24 regulation of new and existing sources of air 25 pollution?

Page 31 1 Α. Yes. 2 And do those programs focus in part on Q. ensuring attainment and maintenance of National Ambient 3 4 Air Quality Standards? 5 Α. Yes. And that's abbreviated NAAQS? 6 Ο. 7 Α. Correct. 8 In connection with the NAAQS program, does the 0. 9 Clean Air Act distinguish between attainment areas and 10 nonattainment areas? 11 Α. Yes. 12 Q. And is an attainment area a geographic region 13 that is at that time attaining the NAAQS standards? 14 Α. Although it -- it's important to Correct. 15 note that an area can be an attainment for some 16 criteria pollutants and not an attainment for others. 17 And depending on the status of an area as Q. 18 attainment or nonattainment for a particular criteria 19 pollutant, do the regulations differ for sources within 20 that area? 21 Α. Yes. 22 And are the regulations more strict for Q. sources located within nonattainment areas? 23 24 Α. Yes. 25 Q. During the time that ChemFab operated its

Page 32 1 Bennington facility, was that facility located in an 2 attainment or nonattainment area with respect to the 3 NAAQS criteria pollutants? 4 Α. I don't know. 5 Q. And same question for the North Bennington 6 facility. 7 Α. I don't know, either. 8 Q. Does the NAAQS program also distinguish 9 between major and minor sources? 10 Α. Yes. 11 And to your knowledge, was ChemFab's 0. 12 Bennington facility a major or minor source with 13 respect to the NAAQS program? 14 Α. I don't know. 15 Q. Same question for the North Bennington 16 facility. 17 Α. I don't know. 18 Q. Under the Clean Air Act, are new sources 19 subject to preconstruction review to ensure attainment 20 of NAAQS standards and to ensure application of 21 up-to-date control technologies? 22 MS. JOSELSON: Object to the form. 23 But you can answer. 24 There was kind of two questions embedded in Α. 25 there.

Page 33 1 0. That's fair enough. I was -- I was 2 getting ahead of myself. Let me break that down. Under the Clean Air Act, are new sources 3 4 subject to preconstruction review? 5 Α. Yes. And is one purpose of preconstruction review 6 7 to -- to ensure attainment of NAAQS standards? 8 That's the ultimate goal, although they Α. 9 typically use technology-based standards, and they may 10 also require offsets or mitigation depending on whether 11 it's an attainment or nonattainment area. 12 0. Under the Clean Air Act, is each state 13 responsible for developing a state implementation plan 14 to regulate sources within its borders? 15 Α. Yes. 16 Is each state's implementation plan required 17 to be at least as stringent as the Clean Air Act? 18 Α. Correct. Meaning that the state program can 19 be more stringent than the federal program. 20 And state implementation plans, or SIPs for 0. 21 short, are subject to EPA review and approval, correct? 22 Α. Correct. 23 0. SIPs can vary from one state to the next, 24 right? 25 Α. Yes.

- Q. Is it fair to say, though, that all states' SIPs have many features in common?
- A. Yes. And that's because EPA has a set of minimum requirements that apply to all states. Also the strategies -- states tend to replicate successful strategies from each other.
- Q. Can you identify any features of Vermont's SIP that make it significantly more stringent than the Clean Air Act?
- A. Not off the top of my head, although generally Vermont has taken a much more stringent approach to toxics across all of its programs, but I can't think of a -- I'm not sufficiently familiar with the details of Vermont's state implementation plan at the moment to be able to recite a specific area in which it's significantly more stringent.
- Q. Focusing on toxics programs, in what ways is Vermont's SIP significantly more stringent than the Clean Air Act?
- A. I can't give you a specific example. I was just noting that as a general matter Vermont, between the Department of Environmental Conservation and the Health Department, had generally taken a more cautious approach, a more conservative approach, to protecting public health than has EPA.

- Q. Has that been true throughout the 1970s to the present, or has it changed at some point along the line?
- A. That's been a consistent theme in the state of Vermont through -- through the passage of all the environmental laws.
- Q. And as a related question, can you identify any feature of Vermont's SIP that makes it significantly more stringent than other states' SIPs?
 - A. I can't identify a specific example.
- Q. So we've discussed criteria pollutants in connection with the Clean Air Act's NAAQS program.
- A. I'm sorry. Can I -- can I go back and amend my answer briefly?
 - O. Yeah. Please.
- A. I just realized one area I am -- I am more familiar with that I'm -- know that Vermont's program is more stringent is in the area of mobile sources. Vermont has joined with a number of other states, including California, to adopt more stringent restrictions on mobile source emissions.
- Q. Mobile sources would include things like vehicles?
 - A. Correct.
 - Q. Are there any particular requirements on

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mobile sources that Vermont's program focuses on?

- A. There's a set of standards that are often referred in shorthand to as the California standards because in addition to the national standards set by EPA, California's allowed to set its own standards. It's the only state that's given that option. But other states are allowed to opt in to the California standards, and Vermont is one of a handful of states that have done so.
- Q. Has Vermont also joined with other states in regulating greenhouse gases?
 - A. Yes.

- Q. And do you have any personal experience with that -- with that program from your time at Vermont DEC?
 - A. Yes.
- Q. And could you describe just the sum and substance of what that -- what that set of requirements is and how Vermont cooperates with other states in implementing it.
 - MS. JOSELSON: Object to the form.
- But you can answer.
 - A. I understand the question. There's a -there's a couple of -- of ways. One relates to the
 mobile source controls along with a group of other

states. The California standards are in part focused on addressing greenhouse gas emissions.

In addition, there's a collaborative of states that are engaged in promoting the use of battery electric vehicles, and I'm not certain if that's worked its way into the state implementation plan or not.

The third area that I know is -- is an active area of development over the past decade has been the State's collaboration as part of the Regional Greenhouse Gas Initiative to promote investment in efficiency but also using a cap and trade program associated with greenhouse gas emissions as the basis of raising the funds for the efficiency investments.

- Q. Okay. Thank you. Turning back to criteria pollutants, we've discussed these in connection with the NAAQS program. Has PFOA or APFO ever been identified as a criteria pollutant?
 - A. No.
- Q. And just to put a finer point on it, has APFO or PFOA ever been identified either by EPA or by Vermont regulators as a criteria pollutant?
 - A. No.
- Q. In addition to national air quality standards, the Clean Air Act also addresses certain specific air pollution problems, correct?

		Page 38
1	A.	Yes.
2	Q.	One being acid rain?
3	A.	Correct.
4	Q.	And another being hazardous air pollutants?
5	A.	Correct.
6	Q.	Does the Clean Air Act require EPA to regulate
7	emissions of hazardous air pollutants?	
8	A.	Yes.
9	Q.	And in connection with that requirement, does
10	EPA publish a list of hazardous air pollutants?	
11	A.	Yes.
12	Q.	Has PFOA or APFO ever appeared on EPA's list
13	of hazardous air pollutants?	
14	A.	No.
15	Q.	To your knowledge, can anyone petition EPA to
16	request	that a new substance be considered for
17	inclusio	on on EPA's hazardous air pollutant list?
18	A.	Yes.
19	Q.	And to your knowledge, has Vermont DEC ever
20	petition	ned EPA to include PFOA or APFO on its hazardous
21	air pollutant list?	
22	A.	Not to my knowledge.
23	Q.	Have you yourself ever petitioned EPA to
24	include	PFOA or APFO on the hazardous air pollutant
25	list?	

Page 39 1 Α. No. 2 Does Vermont separately maintain a list of Q. hazardous air contaminants? 3 Α. Yes. 4 5 0. Has PFOA or APFO ever appeared on Vermont's hazardous air contaminant list? 6 I don't know. But as far as -- to my 7 Α. 8 knowledge, no. I mean, it may have. I don't know 9 what's happened in recent -- the past year or so. 10 Q. In any of your discussions with current or 11 former DEC personnel, has the subject of adding PFOA or 12 APFO to Vermont's hazardous air contaminants list ever 13 come up? 14 Not specifically, although I recall, you know, 15 having a conversation, asking the question of whether 16 or not the State would consider -- was considering that either in the context of the -- any of the programs, 17 18 drinking water, air pollution, hazardous waste 19 management. 20 Did you ask that question generally without 21 referencing any specific programs, or did you ask it 22 specifically for each program? 23 Generally. Without reference to specific Α. 24 programs. 25 Q. And do you recall what the response was to

Page 40 1 your question? 2 Α. That it was something that the State was considering. 3 4 Who -- who made that statement? 5 Α. I honestly can't remember. It was probably 6 Matt Chapman, would have been the person. The reason I 7 think it was probably Matt is I was asking the -- as I 8 recall, I was asking the question during the time that I taught my course and we had the class discussion on 9 10 the North Bennington situation within the class, and 11 I -- I think I called Matt just to ask him what was 12 going on, but I'm not certain. It might have been John 13 or Chuck Schwer or someone else in the program. 14 Okay. Fair enough. So whoever it was, Matt Q. 15 or Chuck or whoever else, when they said that the State 16 was considering regulating APFO or PFOA, did they 17 specifically reference the hazardous air contaminant 18 list or any other regulatory program? 19 MS. JOSELSON: Object to the form. 20 But you can answer. 21 Not that I recall. Α. 22 MR. WEINRAUB: Can we mark Exhibit 4, please. 23 (Deposition Exhibit No. 4 was 24 marked for identification.) 25

Page 41 BY MR. WEINRAUB: 1 2 And, Mr. Mears, I'll represent to you that Exhibit 4 is an excerpt of the Vermont air pollution 3 control rules, including -- including amendments 4 5 through November 30, 2016, and the excerpt consists of Appendix B, which is the hazardous air contaminants 6 7 list. 8 You're familiar with the Vermont air pollution 9 control rules, I take it? 10 Α. Yes. 11 Does that -- does my characterization of the Ο. 12 document appear accurate? 13 Α. I understand, yes. This looks -- yes. 14 That -- this is the right list. 15 Okay. So -- and you're welcome to peruse the 0. 16 list as long as you need, but I'll -- I'll just preview 17 my question for you. My question is, Can we agree that at least as of November 2016 APFO and PFOA were not 18 19 included on Vermont's HAC list? 20 Α. Yes. 21 Ο. Okay. Thank you. 22 Okay. Let's turn back to your report, which 23 is Exhibit 1. 24 MR. WEINRAUB: Actually, I'll pause for a 25 moment. I'm at a transition point, and I am happy to

Page 42 1 keep going, but if anybody would like a break, 2 please --3 MS. JOSELSON: I like to take a break every hour for just a little while. 4 5 MR. WEINRAUB: Sure. That's fine with me. THE WITNESS: That would be great. 6 7 MR. WEINRAUB: So take ten minutes? 8 THE VIDEOGRAPHER: Going off the record at 9:57. 9 10 (A recess was taken.) 11 THE VIDEOGRAPHER: We're back on the record at 12 10:07. 13 BY MR. WEINRAUB: 14 Mr. Mears, if we could turn to your report at Q. 15 page 3. 16 Α. Yes. 17 And specifically at the -- the heading number Q. 18 1, which states "Mr. Flechas shows limited familiarity 19 with Vermont's air pollution statute and regulations 20 and their enforcement." 21 And then below that is the statement that "Mr. 22 Flechas has limited familiarity with Vermont's air 23 pollution statute and regulations. Other than 24 reviewing documents provided to him by Saint-Gobain, he 25 has no prior experience with the Vermont regulatory

Page 43 1 scheme." Do you see that? 2 Α. Yes. And is that language that you entered into 3 Q. 4 this report? 5 Α. Yes. Now, you have adopted all of Dr. Hopke's 6 7 regulatory opinions in this case, correct? 8 Α. Correct. 9 And to your understanding, does Dr. Hopke have any personal history or involvement with Vermont's air 10 11 pollution -- air pollution control rules? 12 Α. Not that I'm aware of. 13 Ο. I take it that Dr. Hopke's lack of prior 14 experience with Vermont regulation was not a concern 15 for you? 16 He did a very careful job of evaluating 17 the record, and that was the primary use that I made of his report was the very careful analysis of the 18 19 regulatory record. 20 Your report also makes the statement that Mr. 21 Flechas' résumé -- and I'm still at that first 22 paragraph under the heading on page 3. Your report 23 states that Mr. Flechas' résumé "reveals no prior 24 experience with the federal CAA air pollution control 25 regulatory scheme." Do you see that?

Page 44 1 Α. I do. 2 Are you aware that Mr. Flechas was an Q. 3 enforcement officer at EPA for 30 years? 4 Α. I did see that. It -- my impression was that 5 his focus was on enforcement of the Resource Conservation Recovery Act. 6 7 Would you agree, though, that the EPA 0. enforcement program trains inspectors to determine 8 9 regulatory requirements across all environmental 10 programs? 11 MS. JOSELSON: Object to the form. 12 But you can answer. 13 Α. I don't know how they train their inspectors 14 and enforcement teams within the programs. Do you know the criteria for EPA issuing 15 Q. inspector credentials to its enforcement officers? 16 17 Α. I do not. 18 I want to talk generally about methodology. Q. 19 And to begin, at pages 4 through 7 of your report, 20 you've opined that ChemFab and Saint-Gobain violated 21 various provisions of Vermont's air pollution control 22 rules. Correct? 23 I'm sorry. Could you repeat the question? 24 So looking generally at pages 4 through 7 of Q. 25 your report.

Page 45 1 Α. Correct. 2 And maybe the best way to do it is if we stay Q. on page 4 and look at heading number 2. 3 Α. 4 Okay. 5 0. Where it says "ChemFab/Saint-Gobain violated Vermont air pollution control permits and regulations." 6 7 Α. Yes. And that section continues through the first 8 0. 9 half of page 7, correct? 10 Α. Yes. 11 And within those pages, you've identified 12 various subsets of regulatory violations, correct? 13 Α. Yes. 14 Could you describe the methodology that you 15 used in reaching these opinions. 16 I looked primarily at the record and exchanges between DEC and ChemFab and looked to the 17 18 record of complaints about odors, the inspection 19 reports from DEC inspectors, and the formal enforcement 20 actions that were taken, as well as the correspondence 21 that referenced noncompliance or areas where there was 22 serious questions about compliance. 23 How did you distinguish between areas where 0. there was noncompliance versus areas where there were 24 25 serious questions about compliance?

A. Well, the most obvious areas where there was clear noncompliance were where there were the assurances of discontinuance, where there were clearly documented violations, agreement by ChemFab that there were violations, and then a formal agreement to resolve those.

There were also violations that were noted in the -- some of the inspection reports.

There were -- and then at another level was the unresolved odor complaints.

And the final category, I can recall in particular a memo from Dick Valentinetti referencing -- a 1999 report referencing emissions from the cupolas that -- that raised a serious question of whether or not there had been an ongoing noncompliance.

So there was a range from -- from formally designated, agreed to, and identified to identified in inspection reports to indicated by the odor complaints to at least a question raised in a -- an inspection report or a memo.

- Q. Does your report ever speak in terms of serious questions of potential noncompliance, or does it consistently speak in terms of actual violations?
- A. Speaks primarily in terms of actual violations.

- Q. So when there are merely questions of potential noncompliance, did you treat those as violations?
 - A. No.

Q. When what you consider to be a violation occurred but it was not designated as such in an AOD or in an inspection report, how did you determine that an actual violation had occurred?

MS. JOSELSON: Object to the form. But you can answer.

A. If the facts in the record as indicated by either an inspector, which I would give the most credibility to, raises -- identifies something as a violation, I counted that as a violation. The fact of the ongoing odor complaints that were never resolved seems self-evident that -- that that was a set of unresolved problems at the plant that reflected violations.

Beyond that, the -- the concerns or questions that were raised I did not treat as violations, but I think it's important context in response to Mr. Flechas' assertions that the State was in full support of the actions that ChemFab was taking.

Q. Do you consider ongoing complaints to constitute violations?

- A. No. But I would construe the emissions that gave rise to those complaints to be violations --
 - Q. Speaking of --

- A. -- and the complaints themselves to be significant and important evidence of that.
- Q. So you referenced odor complaints in particular. Is each individual odor complaint tantamount to a violation?
- A. An isolated complaint standing alone and unverified by either anyone at the plant or a state inspector, no. But if it's verified, then I would consider that to be significant evidence of a violation. And if it were corroborated by multiple other people in the community who experienced the same, you know, sort of emissions as a -- as a nuisance condition, then I would consider that to be significant evidence of a violation.
- Q. During your time at Vermont DEC, did you ever make regulatory determinations regarding odor complaints?
 - A. Personally, no.
- Q. During your time at Vermont DEC, did you ever make regulatory determinations regarding visible emissions?
 - A. Regarding what kind of emissions?

Page 49 1 0. Visible emissions. 2 Α. Visible emissions. No. During your time at Vermont DEC, did you ever 3 Q. 4 make determinations regarding the maintenance of 5 catalytic abators? 6 Α. No. 7 Q. Are you familiar with the regulatory criteria for determining whether an odor complaint rises to the 8 9 level of an objectionable odor violation? 10 Α. Generally, yes. I have not -- as you noted 11 earlier, I have not made that determination myself. 12 In reviewing the regulatory record regarding Q. 13 odor complaints in this case, did you apply those 14 criteria to determine whether an objectionable odor violation had been demonstrated? 15 16 I did not apply them myself directly, but I 17 did rely on the statements of the DEC inspectors as well as some statements by ChemFab environmental staff. 18 19 Or I'm not sure what their job was at ChemFab, but 20 there were definitely ChemFab employees that also 21 described and acknowledged the nuisance conditions. 22 Do you know what the regulatory criteria are Q. 23 for determining whether a nuisance violation has 24 occurred as distinct from an objectionable odor

violation?

- A. I'm not sure that they're that distinct, but yes, I'm generally familiar with the -- the criteria for nuisance conditions, which could include objectionable odors.
- Q. During your time at Vermont DEC, did you ever personally make a regulatory determination regarding nuisance violations?
- A. Not to the extent that I personally made the determination, but I certainly signed off on enforcement orders and accepted the determinations of my expert staff who made those determinations.
- Q. To make sure I understand your methodology, you reviewed the documents identified by Mr. Hopke, correct?
 - A. Yes.

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- Q. And through your review of the documents, you identified what you take to be the relevant facts?
 - A. Correct.
 - Q. And then you drew inferences from those facts?
- A. Yes.
- Q. And you identified what you consider to be the relevant law or regulations?
- A. Yes. There's an interim step in there, which is also that the -- the inferences were based on who the -- kind of the weight of the evidence, including

the nature of the people -- the experts on-site making interpretations of that evidence.

- Q. And then as a next step, did you identify what you consider to be the relevant law and regulations?
 - A. Yes.

Q. And then you would apply the law to the facts and the inferences as you understand them to be?

MS. JOSELSON: Object to the form.

But you can answer.

- A. Yes. But again, in many ways I also give significant deference to the interpretations of the -- that information and the -- the application of that to the permit requirements and the -- specifically the restrictions on creating nuisance and odor conditions that were applied by the DEC inspectors and air pollution control experts.
- Q. So in reviewing the regulatory record, did you generally grant deference to discretionary determinations of the Vermont regulators that were on the scene during the relevant time period?
- A. I wouldn't describe them as discretionary, but yes, I did give significant credence to their -- their determinations. I mean, they were -- just to clarify, if I might, the word "discretionary" might suggest that it was somehow arbitrary, and that's not my experience

of the way that they applied the -- the criteria to the complaints and their own observations.

- Q. And to be clear, I don't mean to suggest that the terms are synonymous. You can have discretion which you can apply arbitrarily or you can apply it nonarbitrarily. So when I say "discretion," I mean it in a neutral sense.
 - A. I understand.

- Q. Is there any other component of your methodology that we have not addressed?
- A. Well, the other -- there are pieces of Mr. Flechas' opinions and reports that describe the broad public policy and legal framework around air pollution control and the regulation of hazardous air pollutants that I disagree with that come not from the record but from my own experience as someone who's worked for many years in the -- the implementation of -- of environmental law and policy as applied to pollutants and hazardous pollution in particular.
- Q. But with respect to whether a violation has or hasn't occurred, is your methodology essentially the steps that we've discussed already, or is there some additional component that we have not discussed?
- A. No. That's -- that's correct. We've -- we've discussed my methodology.

- Q. Did you apply any engineering principles in the course of reaching your opinions in this case?
- A. Not to form an independent opinion. I have to say it's been helpful that I have had some engineering experience in terms of understanding the -- the terminology and language, but I relied entirely on people who have expertise in those areas.
- Q. And specifically the -- the regulatory staff during the time period that ChemFab and Saint-Gobain were operating in Vermont?
- A. Correct. As well as the information provided by Dr. Hopke.
- Q. Okay. Turning now to some of your other opinions beginning at page 7. And heading 3 states "Air emissions of APFO were a regulatory concern by 1997." Do you see that?
 - A. I do.
- Q. What was your methodology in reaching that opinion?
- A. That was based on my review of the record, of information that Dr. Hopke had compiled and that I reviewed, as well as my own knowledge of the evolution of regulatory responses to PFOA.
- Q. What is your understanding of regulatory responses to PFOA?

A. That's a long -- long answer. I'll give the highlights, and you can tell me where to spend more time. But there were -- from the time that PFOA first began to be used anywhere through really the -- the -- I mean, there were some exchanges, I understand, that happened, like, down in West Virginia and some parts of the country around PFOA and DuPont that I can't recall specifically, but I know there were at least some exchanges in the '70s or maybe the '80s, but the first time that there was a serious public conversation about PFOA and the regulatory process was in the -- the late '90s.

There was -- there were clues in Vermont when you look at the record about the -- the risks associated with the emissions at the North Bennington ChemFab plant that should have given rise both to the State and to ChemFab that more attention should have been paid to it. But really the -- the most significant public discussion and discourse around a regulatory response specific to PFOA was in the late '90s and into the early 2000s as publicity around the litigation involving the West Virginia case and then the class-action suit filed by Rob Bilott as well as the exchanges with EPA began to emerge onto the scene and then EPA and the states began to have a greater

Page 55 1 awareness of the risks. 2 And to be clear, your understanding of this regulatory history is something that you developed 3 after your time with Vermont DEC; is that correct? 4 5 Α. That's correct. So I believe you testified that there were 6 7 clues in Vermont apparent in the record that should have given rise both to the State and to ChemFab that 8 9 more attention should have been paid to PFOA. Is -- is 10 that your testimony? 11 Α. Yes. 12 Q. So is it your testimony that the State was on notice of PFOA issues in the late 1990s that it should 13 14 have brought more attention to bear on? 15 And ChemFab. Α. Both, yes. 16 Ο. But also the State? 17 Α. Yes. 18 Okay. If we could turn to Mr. -- well, strike Q. 19 that. I need to show you a different exhibit. 20 (Deposition Exhibit No. 5 was 21 marked for identification.) 22 BY MR. WEINRAUB: 23 So Exhibit 5 is Dr. Hopke's rebuttal report 0. 24 dated August 1, 2018. Am I correct that you have not 25 seen this document before?

A. That is correct.

Q. And you're welcome to read as much of it as you like, but my -- my question will focus on the final paragraph on page 4. And so there's a heading number 5, "Rebuttal of opinions of Felix W. Flechas, P.E.," and towards the end of that paragraph, Dr. Hopke states, "I will note that Mr. Flechas offered no scientific opinions about whether ChemFab/Saint-Gobain knew or should have known about its emissions of PFOA or whether the company failed to utilize available control technologies for control of its emissions of PFOA."

Now, recognizing that you have not seen this -- this report before, I'd like to ask you about the use of the term "scientific opinions." This will sound more flip than I mean it to, but essentially my question is, Is there any such thing as a scientific opinion about whether a company knew or should have known something?

MS. JOSELSON: Object to the form.

A. I mean, that seems a matter of grammar and semantics. I -- I would note that it may be that he meant that there was -- you know, he wasn't going through to do kind of a forensic analysis of what ChemFab knew and when they knew it. I'll note, though,

for what it's worth, since we're on this topic, that I will offer a nonscientific opinion but one grounded in the -- the record and the facts that the -- the combination of the complaints, the nature of the citizen complaints, the nature of the information known back as early as the early '80s about Chem- -- by ChemFab about the impacts of the exposure to their process that were having on their employees, that there were substantial questions about the public health impacts of the chemicals they were using, and this to me suggests that there was a failure to fulfill their responsibility to really figure out what those -- the causes of those problems were and to communicate those to the State of Vermont.

MR. WEINRAUB: I'm going to move to strike that as nonresponsive.

- Q. And I won't ask you to speak for Dr. Hopke because that would not be fair, but let me just ask you, in your experience is -- is a "should have known" standard part of the reasonableness standard of conduct in a tort case?
 - MS. JOSELSON: Object to the form.
- A. I mean, tort law depends on the -- the jurisdiction, and how reasonableness is defined is often defined by reference to specific case law, but as

- a general matter, I would agree with that statement.
- Q. Does the phrase "should have known" appear anywhere in the Vermont Air Pollution Control Regulations?
 - A. I don't know.
- Q. During your time with Vermont DEC, did you ever make regulatory determinations regarding whether a plant owner/operator knew or should have known any particular fact?
 - A. Yes.

- Q. And could you describe that experience.
- A. It's frequently the case that people in the regulated community, whether it's a company or developer, are taking actions on the landscape that have a negative impact on the environment or the public health, and in pursuing an enforcement case, in terms of determining whether to pursue it; what level of gravity the penalty to pursue, whether to pursue it as a civil, administrative, or criminal; considerations of what they should have anticipated to be the results as a consequence of their actions were very often a consideration.
- Q. And so "knew or should have known" is -- is something that you've applied in the enforcement context, correct?

- A. Correct. Although that -- that relates in some ways to the questions of whether or not someone should have applied for a permit or should have identified a particular chemical as a potential contaminant of concern that should be investigated or considered for an emissions limitation.
- Q. So whether a permit violation occurred depends in part on whether the company knew or should have known something; is that your testimony?
- A. It -- it can, yes. I mean, I appreciate that from the perspective of the regulated community they frequently turn as a default, and should, to the list of identified chemicals that are regulated, but the statutes as -- in general and in the case of the Clean Air Act and in the state air pollution laws also note that where there's information about public health or environmental risks of other chemicals, those are -- are subject to regulation, and companies are on notice of that and have been for many decades.
- Q. And is there a particular regulation that you're referencing in that testimony?
- A. There's -- each of the regulations that I can think of that involve toxics provisions, whether it's drinking water, surface water, hazardous waste, or air, all include definitions of hazardous or toxic chemicals

that include open-ended language that allow the regulators, the agency or DEC commissioner, and the regulated community to identify chemicals that are not listed but pose a threat to public health or the environment.

- Q. And so in the air context, are you referring to the regulatory definition of a hazardous air contaminant?
 - A. That would be a good example of one, yes.
- Q. Are there any other examples in the air context of situations where a regulated source needs to go beyond specific lists of -- of chemicals of concern?
- A. Although it's seldom used, there actually is the discretion of the State and EPA to expand the list of criteria pollutants as well.
- Q. But is there ever a situation where a source is required to take any action with respect to pollutants that are not listed as criteria pollutants in connection with Ambient Air Quality Standards?
- A. Beyond the ones -- beyond the hazardous air pollutant one, not that I can recall specifically.

 There may be others. I just am not familiar with them.
- Q. Do you recall any particular entities or violations in which you personally made a regulatory finding regarding what a company knew or should have

known?

- A. That goes back over most of my career, and so I can't recall a specific example. The time -- certainly when I was in the State of Vermont as the DEC commissioner, I did not make those determinations personally. Those determinations were made typically by my inspectors and enforcement staff or their direct and immediate supervisors. But there have been times over the course of my career where I've been on the front line of either performing inspections or working with inspectors as an attorney in which we've made those determinations.
- Q. And what would those determinations look like? Would they be findings of fact, would they be arguments in a legal brief, or something else?
- A. They would be primarily findings of fact, but findings of fact that are oriented around the criteria and also what was known in the industry, what specific facts the regulated entity had before them, looking at monitoring information, assessments by their own experts, correspondence with regulators.
- Q. Have you ever made findings of fact of that nature based solely on historical records without speaking to any of the people with contemporaneous knowledge of those facts?

- A. Certainly I've used documents that were drafted by or developed by people that were not available to me to speak to because they were -- those people were no longer with those organizations or had -- had moved on or -- depending on how long ago they were. But to the implication of the question, that it's always better to speak in person to the people involved making those determinations, I would agree with that implication.
- Q. Are you familiar with any legal authorities holding that a corporation's knowledge or intent or other states of mind are not proper subjects for expert testimony?
 - A. No.

- Q. You've never heard of any such authorities during your time as a lawyer?
 - A. No.
 - Q. Or during your time as a law school professor?
- A. No. I'm -- I'm certainly familiar with the Daubert standard and the nature of expert opinions. What I'm struggling with is the nature of the use of the word "opinion." There are -- when determining states of mind, there are, of course -- when you have the opportunity for the Court or the tribunal or the person making the opinion to speak to that person, to

observe their demeanor, those are all valuable, but it's also important to look at documentation, documents, testimony from others, correspondence that happened at the same time, to be able to determine what the nature is of what the company knew and at what levels they knew it, what level of staff or leadership.

Q. And you're not familiar with any authority discussing whether it's appropriate for experts to review the documents and give opinions regarding a company's knowledge or other state of mind?

MS. JOSELSON: Object to the form.

A. It seems unusual to -- to have someone who's serving as an expert that's evaluating the nature of the regulatory response by regulatory agency.

Typically it's not so much a matter of an expert witness that a government agency relies on to make determinations of violations or what level of enforcement to take. That's usually made by the agencies themself.

But I've been called into this case in response to assertions by Mr. Flechas that the State somehow was -- was okay with or even affirmatively in support of or approving the actions that ChemFab took that led to the emission of PFOA, and so that's -- I just -- frankly, this is the first time I've ever

experienced an expert being involved in a case like this, but that doesn't mean it hasn't happened before. It's just not something I'm familiar with.

- Q. And -- and to be clear -- and I'm not sure my questions were clear. This is just to clarify that.

 What I'm really asking is your understanding of an expert's role in testifying in a lawsuit about what a company knew or didn't know or should have known. You know, as a former law school dean, former law school professor, and -- and an attorney, are you familiar with any legal authorities talking about whether it's appropriate for an expert witness to testify in a court case about what a company knew or should have known?

 MS. JOSELSON: Objection.
 - A. No, I'm not.
- Q. Do you view that to be a proper subject of expert testimony?
- A. It's an interesting question in that Mr. Flechas makes a set of assertions in his testimony as to essentially what he asserts to be the regulatory state of mind of the State of Vermont officials and in a way that is inconsistent with my experience and work as a regulator and within state agencies, and it's that set of assertions that I'm engaging with to respond to, and -- and that does seem to me inappropriate.

To the extent that Mr. Flechas is -- is authorized to provide an expert opinion on the state of -- the state of the relationship between the State of Vermont and ChemFab, to present a different perspective from the perspective of someone who's worked in the State of Vermont on the Clean Air Act issues seems an appropriate set of information to be included before the tribunal.

- Q. And you understand that Mr. Flechas in turn was responding to opinions by Dr. Hopke regarding the knowledge and state of mind of ChemFab and Saint-Gobain, correct?
 - MS. JOSELSON: Object to the form.
- A. I'm not sure the -- the reasons for -- for Mr. Flechas' testimony.
- Q. Could you turn with me to Exhibit 2, which is Dr. Hopke's merits report. And at the bottom of page 6, heading number 5 states, "ChemFab/Saint-Gobain knew or should have known it was emitting PFOA in North Bennington." Do you see that?
 - A. Yes.
- Q. Is that one of the opinions of Dr. Hopke's that you adopted for purposes of this case?
- A. I'm not sure if "adopt" is the right word, but
 I agree with -- with it in the sense like I'm not

accepting his assertions because of his expertise. I agree with his assertions based on my own review of the same record and documents.

- Q. And do you believe that it requires a regulatory expert to read documents and draw inferences regarding what a company knew or didn't know?
 - MS. JOSELSON: Object to the form.
- It's -- it is somewhat of a puzzle that --Α. that this set of issues are being presented as -- as a matter of expert testimony in that I assume the tribunal will look at the same facts and form its own opinion, but I do think it's -- it's relevant and useful that someone with Dr. Hopke's background and experience of looking through technical documents can compile them and describe and explain the -- the logical conclusions that would flow from those documents, as I also think it's valuable for someone like me as a lawyer to be able to provide to the process an opinion on what these documents suggest in terms of how -- how an agency -- how a company -- a regulated company and an agency should work through emerging knowledge about contaminants of concern such as PFOA.
- Q. I believe you testified that you're not aware that Dr. Hopke had any prior regulatory experience of

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Page 67 1 his own. Correct? 2 Α. Yeah. I'm unaware if he has had any such 3 experience. 4 And you're also aware -- you also testified 5 that you are not aware how Dr. Hopke selected the documents that he compiled and based his opinions on, 6 7 correct? 8 Α. Correct. 9 Now, you have practiced law on behalf of 10 clients in the past, correct? 11 Α. Yes. 12 Q. And have you drafted and submitted legal briefs on behalf of your clients? 13 14 Α. Yes. 15 Have you given oral arguments to courts on 0. 16 behalf of your clients? 17 Α. Yes. 18 Q. Have you tried cases? 19 Α. Yes. 20 Have you delivered closing arguments? Q. 21 Α. Yes. 22 And in doing so, you were advocating on behalf Q. 23 of your clients, correct? 24 Α. Correct. 25 Q. Now, in this case you've been proffered as an

expert witness and not as an advocate, right?

A. Yes.

- Q. So in preparing your report, did you make any conscious effort to avoid writing in the style of an advocate and instead write in a more objective style?
 - A. Yes, I did.
- Q. How so? Let me -- let me put a little meat on that -- on that bone. How did your writing process here differ from how you might draft a legal brief on behalf of one of your clients?

MS. JOSELSON: Object to the form.

A. The -- for me the writing process and the process of forming an opinion and the substance are all intersected, so it's less -- my response is less in response to the question of how I write and more about how do I form opinions, and in the role of a commissioner, for instance, at a department, the role I played at Vermont DEC and as a state official, which I've done over the years, I often -- always am trying to take in the information that's available without judging it based on trying to get to a particular outcome but more in terms of trying to assess what is -- what is an appropriate and neutral interpretation of that information, and so that was the process I was going through.

- I -- I read Mr. Flechas' report carefully and the documents he relied on; I looked through the information that Dr. Hopke had carefully compiled, which I found to be more complete; and -- and then formed my own opinion from that.
- Q. If I could refer you back to your report, which is Exhibit 1, and ask you to turn to page 4.

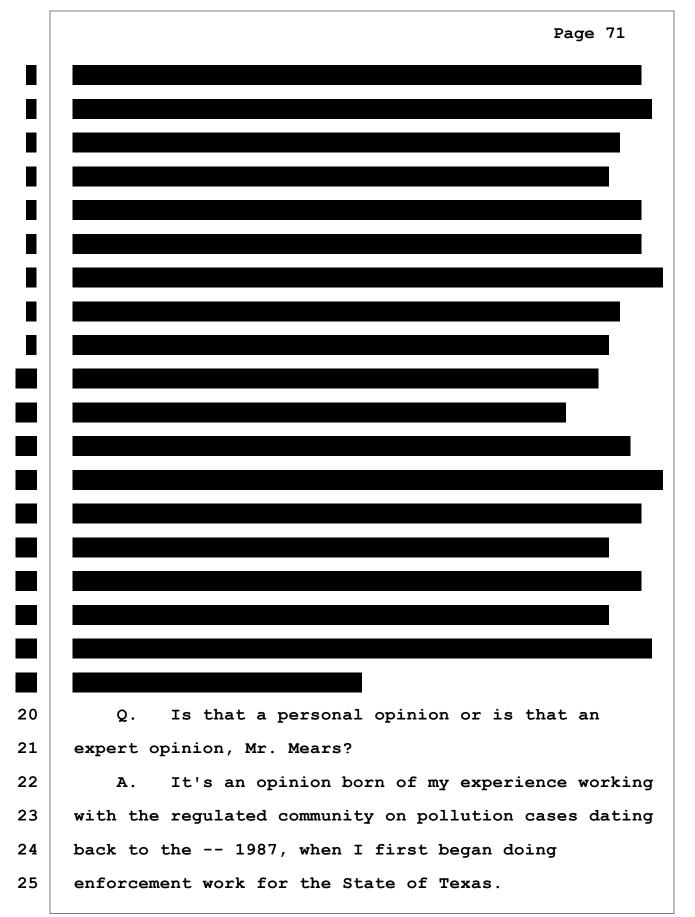
MS. JOSELSON: Exhibit 1, page 4?

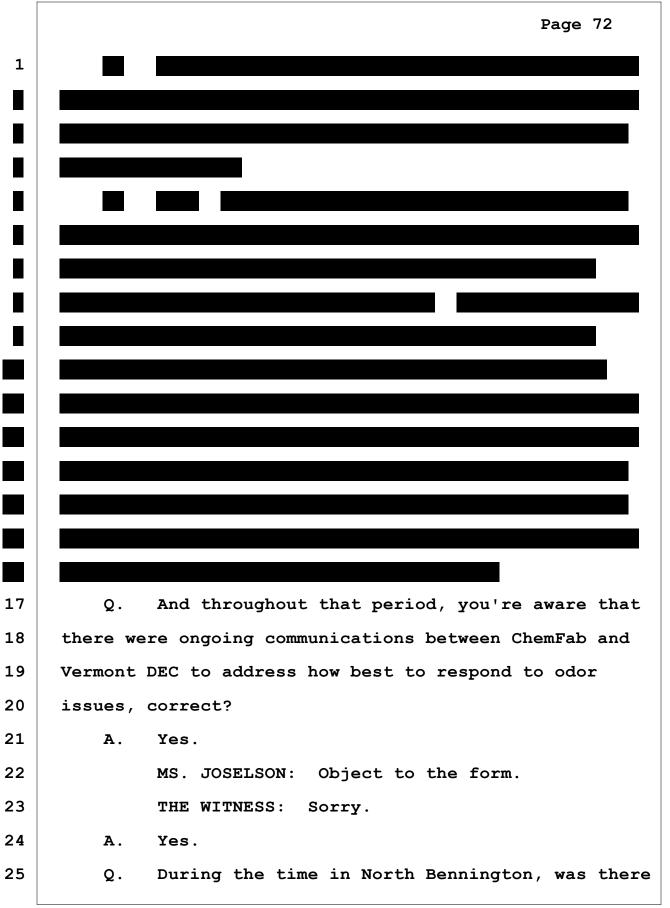
MR. WEINRAUB: Correct.

A. Yes. I see.

- Q. And looking at the top paragraph of heading number 2, about five lines from the top, there's a sentence that reads, "Furthermore, as can be seen in this case, it has been state policy to attempt to secure compliance through cooperation with industry whenever possible. Unfortunately, ChemFab/Saint-Gobain took advantage of this policy of cooperation to continue polluting for many years until it found it economically more attractive to move its operations to New Hampshire where air pollution controls were not required at the time." Do you see that?
 - A. I do.
- Q. The phrase "took advantage of this policy," is that a regulatory term of art?
 - A. No.

	Page 70
1	Q. What are the criteria for determining whether
2	a company is taking advantage of versus working
3	cooperatively with regulators?
4	





Page 73 1 ever a fine imposed because of odor issues? 2 Α. No. You testified earlier that you deferred 3 Q. 4 substantially to the judgment of regulators on the 5 ground that were making determinations within their discretion during the relevant time period. Correct? 6 7 Α. Correct. Do you disagree with the lack of formal 8 0. 9 enforcement proceedings against ChemFab or Saint-Gobain 10 during that time period? 11 MS. JOSELSON: Object to the form. 12 But you can answer. With respect to the issue of odors, I do not 13 Α. 14 challenge the -- the department's decision not to bring 15 an enforcement action or hold -- to assess fines 16 specifically for that set of violations, and I can 17 explain if helpful. So you are not offering an opinion that 18 0. 19 ChemFab or Saint-Gobain should have been fined or 20 penalized during that time period for not doing more to 21 address odor issues, correct? 22 Α. I'm suggesting that I don't second-guess No. 23 the department's decision to not assess penalties for 24 the odor violations in and of themselves. Odor and

nuisance conditions are very difficult to prove, and

when a defendant or a violator in this case challenges them, it can be very expensive, and the outcomes are uncertain. But the nature of those odor complaints, the persistent nature of them, combined with the fact that the company did not have and hadn't sought the necessary regulatory approvals for -- for permits for me raised serious questions of whether the State should have taken stronger enforcement actions, not necessarily -- I -- I don't offer an opinion with regard to penalty specifically, but it seems clear to me that there should have been stronger injunctive relief and orders in terms of further investigation of alternatives and of treatment systems and ways to mitigate or eliminate the odor and nuisance complaints.

- Q. So in your opinion, the State should have -should have taken stronger enforcement actions during
 the time that ChemFab and Saint-Gobain operated in
 Vermont?
 - A. Yes.
- Q. But the officials in charge at that time did not share that opinion, apparently; would you agree?

 MS. JOSELSON: Object to the form.
- A. I don't know who agreed and didn't agree within the -- the Agency of Natural Resource and the Department of Environmental Conservation. There's no

clear record that I could find of what was communicated between the -- the head of the air pollution control program and the DEC commissioner and the ANR secretary and the Governor's Office. So, you know, state government and a department like that is not monolithic, so I'm not sure. There are some indications from some of the inspections; for instance, from Chris Jones, that suggest -- and a letter from Dick Valentinetti that suggest that they were considering particularly in the late 1990s taking a stronger action.

- Q. You testified that odor and -- and nuisance can be very difficult to prove, right?
 - A. Correct.
- Q. And so the fact that an odor complaint or a nuisance complaint is made does not mean that an odor or nuisance violation actually occurred, correct?
- A. No. It's more -- the point I was trying to make is that it can be very difficult to prove to a tribunal, to a judge, that an odor or nuisance complaint has occurred because it relies on the -- on the judgment, even expert informed judgment, of inspectors, and it's relatively easy for a defendant or an alleged violator in those circumstances to -- to challenge that. So frequently for very practical

reasons state regulatory agencies do not pursue nuisance or odor violations in and of themselves. They typically use those as indicators to look for other -- other emissions or problems at the site and when at all possible try, as they did in this case, to work collaboratively with the company to find ways to address those.

- Q. Do you have any way of knowing whether formal enforcement proceedings charging ChemFab or Saint-Gobain with odor or nuisance violations would have met the standard of proof to establish such violations in a court?
 - MS. JOSELSON: Object to the form.
- A. I have some information. As I noted earlier, the fact that there were frequent complaints by multiple different complainants that were corroborated by trained inspectors from the State are strong indication to me that there were in fact violations that could have been brought.
- Q. And had violations been brought, ChemFab and Saint-Gobain would have had the right to challenge that evidence and attempt to show that no such violation actually occurred, right?
 - A. Correct.
 - Q. And because there was no enforcement

Page 77 proceeding, you have no way of knowing which viewpoint would have prevailed in any such proceeding, correct? I don't know that I would agree that I would Α. have no way of knowing, but it would certainly be very difficult to predict. So when you say that violations occurred, you're not necessarily opining that violations could have been established had an enforcement proceeding been brought at the time, right? MS. JOSELSON: Object. No. As I -- as I explained earlier, it's -- it's very hard to predict how a tribunal will rule on odor and nuisance complaints. So you're giving a personal opinion that in your view violations occurred, but you don't know whether that opinion would have prevailed if challenged? MS. JOSELSON: Objection. In my opinion, but as I noted, informed by the Α. inspections and inspection reports by DEC inspectors who were on the scene and at the site and observed the -- the smoke and the odors and the other impacts. Q. Okay. MR. WEINRAUB: I'm at a transition point.

Happy to move on, but if you'd like to take a -- take a

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	Page 78
1	break, that's fine.
2	MS. JOSELSON: That would be great. Thanks.
3	MR. WEINRAUB: Sure. Thank you.
4	THE VIDEOGRAPHER: Going off the record at
5	11:05.
6	(A recess was taken.)
7	THE VIDEOGRAPHER: We are back on the record
8	at 11:20.
9	BY MR. WEINRAUB:
10	Q. Okay, Mr. Mears. Let's turn to page 3 of your
11	report. And under heading 1, the second paragraph
12	down, there's a discussion of the two types of permits
13	required by the Clean Air Act. Do you see that?
14	A. I do.
15	Q. And the third sentence in that paragraph
16	states, "Operating permits are required under Title V
17	of the CAA, as amended in 1990, to operate air
18	contaminant sources." Do you see that?
19	A. I do.
20	Q. Then down in the next paragraph, towards the
21	end, there's a sentence that reads, "ChemFab did not
22	apply for a Title V operating permit until April 26,
23	1996." And the paragraph ends, "The operating permit
24	was never granted by DEC." Do you see that language?
25	A. I do.

- Q. Is it your opinion that ChemFab violated the operating permit requirement under Clean Air Act Title V?
 - A. No.

- Q. And Dr. Hopke didn't identify any such violation of the operating permit requirements, correct?
 - A. Correct.
- Q. In fact, Dr. Hopke's report does not cite the operating permit requirement under the Clean Air Act or Vermont's rules, does it?
- A. He does cite Vermont's rules, but he does not reference a violation of the operating permit that was never issued.
- Q. So when you state that operating permits were required under the Clean Air Act as amended in 1990 and that ChemFab applied for an operating permit in April of 1996, you're not suggesting that ChemFab's application was untimely, are you?
- A. I am suggesting that it's not at all clear that they had an operating permit authorizing them to operate their various processing facilities even though there was a clear requirement in the statute, state law and federal law, that required operating permits for sources of pollution.

- Q. So just so I'm clear, is it your opinion that ChemFab violated the requirement to have an operating permit?
- A. No. As I said earlier, that's not my contention, although it is of serious question of whether or not they should have had one. But I offer this primarily in response to Mr. Flechas' suggestion that ChemFab was operating in full compliance with all of the Clean Air Act requirements of the State of Vermont and the Clean Air Act.
- Q. We'll talk about Mr. Flechas' opinions in a moment, but for now I want to make sure that I understand your opinions. You say that ChemFab applied for an operating permit on April 26, 1996. Is it your opinion that that application was timely, or do you believe that application occurred after ChemFab's deadline to apply for a permit?
- A. I don't know enough. There's not enough information for me to determine whether they were -- when they were required to apply for it, an operating permit, or whether or not DEC would have required one had they applied --
 - O. What information --
- A. -- but it's very clear to me that if the requirement -- if they were required to apply for an

Page 81 operating permit, they should have had one -- they 1 2 should have applied much sooner than April of 1996 in response to a requirement that came into effect in the 3 4 early 1990s. 5 What is your understanding of when companies 6 were required to apply for operating permits under 7 Title V of the Clean Air Act? 8 It -- my understanding is that it varied Α. 9 depending on the state and when the states adopted 10 those requirements into their state implementation plan 11 and updated their regulations, but typically it was 12 within a year or two of 1990. 13 MR. WEINRAUB: Mark this, please. This will 14 be Exhibit 6. 15 (Deposition Exhibit No. 6 was 16 marked for identification.) 17 BY MR. WEINRAUB: 18 Q. Bear with me for a moment, please. 19 Okay. Apologies for the delay. I'm a 20 paperless guy trying to make my way in a world full of 21 paper. 22 If you'll turn with me to the page that's --23 that has page number 32250 in the upper left. And then 24 about halfway down the page, there's a paragraph that 25 reads, "Title V establishes timeframes for developing

Page 82 1 and implementing the State permit programs. Within 3 2 years of enactment (i.e., no later than November 15, 1993), States must submit proposed permit programs to 3 4 EPA for approval. The EPA must act to approve or 5 disapprove a State program within 1 year of submittal 6 by the State to EPA." Do you see that? 7 Α. I do. So Vermont had until November of 1993 to 8 0. 9 submit its proposed operating permit program to EPA, 10 correct? 11 Α. Correct. 12 Q. And -- and whenever Vermont submitted its 13 program, EPA had one year to approve or disapprove the program, correct? 14 15 Correct. Α. 16 Do you know when Vermont submitted its 17 operating permit program to EPA? 18 Α. I do not. 19 MR. WEINRAUB: Let's mark this one, please. 20 This will be Exhibit 7. 21 (Deposition Exhibit No. 7 was 22 marked for identification.) 23 BY MR. WEINRAUB: 24 On the first page of Exhibit 7, if you'll read 0. 25 with me, in the bottom right-hand corner, there's a

Page 83 1 heading, 1, that reads "Title V Program Support 2 Materials." Under that it states, "Vermont's title V program was submitted by the State on April 28, 1995. 3 4 The submittal was found to be administratively complete 5 on June 12, 1995." Do you see that language? I do. 6 Α. 7 Q. Do you have any reason to dispute that 8 Vermont --9 Α. I --10 Q. -- that Vermont submitted its program to EPA in 1995? 11 12 Α. No. 13 Q. Do you know when EPA granted interim approval 14 of Vermont's operating permit program? 15 Α. I do not. 16 Do you have any reason to dispute that it 17 granted such approval in October of 1996? 18 Α. No, I do not. 19 Do you have any -- any reason to dispute that 20 under CAA Title V ChemFab had until October 1997 to 21 apply for an operating permit program? And I'm not 22 asking you to agree with me. Just asking if you have 23 any reason to dispute that that's --24 I have no reason to dispute that. Α. 25 Q. Do you know what the date was under -- under

Page 84 the state program by which ChemFab needed to apply for an operating permit? Α. No, I do not. So is it fair to say that as you sit here today you don't have any basis to opine that ChemFab's application for an operating permit was untimely under the Clean Air Act? And I appreciate the clarification of the Α. No. review of the Federal Register, which makes it clear that they were probably not. Now, you state -- well, let's turn back to that same language in your report at page 3. And the third paragraph under heading 1 is where we've been reading from. The final sentence states, "The operating permit was never granted by DEC." Do you see that? Α. I do. To your knowledge, did DEC ever take any final Q. application -- strike that. To your knowledge, did DEC ever take any final action on the application? Α. As far as I'm aware, they did not. And is it your view that ChemFab violated the 0.

Title V operating permit requirement by continuing to

operate while its application was pending before DEC?

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- A. Not on that basis. Not on the basis that you just described, no.
- Q. Was there some other violation of the operating permit requirement that you have in mind?
- A. There was no operating permit for them to have violated.
- Q. Was there any other basis on which you would opine that they violated the operating permit rules?
- A. I don't know the extent to which the -- those rules described the nature of -- of operations, what substantive obligations need to be met during the pendency of a decision on a permit, but in terms of the procedure of a failure to apply for the permit, no, I would assume that there was -- I have no reason to think that there was a violation of that particular procedural requirement.
- Q. Do you think your report on page 3 is sufficiently clear in informing the Court that you are not asserting a violation of the operating permit rules?
 - MS. JOSELSON: Object to the form.
- A. The main point that I was trying to make and that I think is clear enough is that the assertion by Mr. Flechas that ChemFab was operating under -- with the approval of -- of a permit issued by the department

was incorrect. That was the main point that I was trying to make.

- Q. But in -- and again, we'll turn to Mr. Flechas' language in a moment, but when your report states that there was a requirement to have an operating permit under the 1990 amendments and that ChemFab didn't apply until April 1996 and that the permit was never granted, do you think it would have been helpful to inform the Court of what the applicable deadlines were and of whether it was appropriate for ChemFab to continue operating while its application was pending?
 - MS. JOSELSON: Objection to the form.
- A. It might have been helpful, but that was not the point of my testimony. My point of my testimony, as I've indicated, was to respond to Mr. Flechas' assertion that they were operating in compliance with an operating permit or with all of -- you know, permit obligations that were required, and it's not at all clear to me that they were.
- Q. Without the benefit of the Federal Register provisions that we've just walked through, do you think a court reading through page 3 would have come away with the impression that you were suggesting a violation of the operating permit rules?

Page 87 1 MS. JOSELSON: Objection to the form. 2 Α. I think it suggests that there's a question about what regulatory status they had and what 3 approvals they were operating under. 4 5 But at present there is no question, correct? 6 There's no question as -- in your mind as you sit here 7 as to whether the application was timely? 8 MS. JOSELSON: Object to the form. 9 Α. No, I do not. At this point given the 10 information you just shared from the Federal Register, I don't have any question that their application was 11 12 timely. 13 MR. WEINRAUB: So let's mark Mr. Flechas' 14 report as Exhibit 8. 15 (Deposition Exhibit No. 8 was 16 marked for identification.) 17 BY MR. WEINRAUB: 18 Ο. And before turning to that, another moment 19 on -- on pages 3 and 4 of your report. On page 3, 20 third paragraph down, your report states, "On page 15 21 of his testimony, Mr. Flechas confuses the two types of 22 permits by erroneously describing the permit issued in 23 1990 by Vermont DEC as an operating permit." Do you 24 see that language? I do. 25 Α.

- Q. And then on the next page, page 4 at the very top, just the introductory phrase states, "In addition to confusing the nature and extent of ChemFab's permit authorizations," and the sentence continues. Do you see that language?
 - A. I do, yes.

- Q. So let's turn now to Mr. Flechas' report marked as Exhibit 8 and specifically to page 15. And in the second complete paragraph, the final sentence of the paragraph states, "ChemFab had an operating permit well before this date in 1990." Do you see that?
 - A. I do.
- Q. And is that the -- the sentence that you believe misstates the two types -- confuses the two types of permits?
 - A. Yes.
- Q. Now, in the preceding sentences in that same paragraph, would you agree that Mr. Flechas clearly distinguishes between "a permit for construction" and "operating permits"?
 - A. Yes.
- Q. And in the parenthetical that follows the statement that -- that you were critical of, would you agree that Mr. Flechas accurately describes the 1990 permit as a permit to construct?

Page 89 1 Α. I'm sorry. I -- I lost -- I must have lost 2 the --Yeah. 3 Q. 4 Α. -- reference. 5 0. That's my fault. So I'm at the very end of 6 that same paragraph, and there's a parenthetical. 7 is the citation --8 Oh, I see. "Letter" -- pardon. Α. 9 So -- and it cites to "Valintinetti, Letter 10 transmitting permit to Construct, 1990." You see that? 11 Α. Yes. Yes. 12 MR. WEINRAUB: And let's mark Exhibit 9. 13 (Deposition Exhibit No. 9 was 14 marked for identification.) 15 BY MR. WEINRAUB: 16 Do you recognize Exhibit 9 to be the 1990 17 construction permit? I do. 18 Α. 19 If you could turn with me to the last page of 20 the exhibit, which is DEC's cover letter to ChemFab 21 transmitting the permit. In the "Re" line, DEC 22 describes this permit as a permit "to Construct and 23 Operate a PTFE (Teflon) Coating Unit." Do you see 24 that? I do. 25 Α.

- Q. And then down in the body of the letter, do you see -- and let's look at the second paragraph in particular. In the body of the letter, do you see that DEC is granting "approval to install and operate said coating unit and associated equipment"?
 - A. I do.

- Q. Is it fairly clear to you from that context that what Mr. Flechas' statement was referring to is that ChemFab had DEC's permission to operate the towers in place at that time?
 - MS. JOSELSON: Object to the form.
- A. That may have been his -- his intention, and my -- the point of my report is that it's important in this context to be clear, and there is confusion when you refer -- when one refers to an operating permit, because it has specific legal meaning in the context of the Clean Air Act, and that's different -- when one gets a preconstruction permit and it's approved, you are entitled to operate the particular unit that has been approved, you know, subject to the conditions of that permit, so the term "operate" in its non-Clean Air Act legal sense applies. So my point was to show that there's a distinct legal meaning and it's important to clarify that the entire facility did not have an operating permit as that term is used under the Clean

Page 91 1 Air Act. 2 And so taking into account your -- your view Q. that Mr. Flechas could have worded his statement 3 4 differently, does it nevertheless appear from his 5 report that he knows the difference between a 6 construction permit and an operating permit? 7 MS. JOSELSON: Object. I can't be certain, but he certainly uses the 8 Α. 9 two terms distinctly, and so it's -- it's clear to me 10 he understands the basic structure, although he 11 blurred -- blurred that structure in his statement --12 or opinion. 13 Q. Okay. Let's turn now to the subject of 14 construction permits and to your report at -- back to 15 page 3. And first I'd like to focus on the time period 16 prior to 1979. 17 Well, as a preface to that, the bottom 18 paragraph in your report on page 3, you state, 19 "Further, Vermont adopted rules in 1979 requiring 20 permits for construction, installation or modification of any air contaminant source." Do you see that? 21 22 Α. I do. 23 And so now focusing on the period before 1979, 24 Vermont did not require construction permits before

1979, correct?

A. Correct.

- Q. So is it fair to say there was no construction permit requirement during the time that ChemFab operated its facility in Bennington?
- A. It's fair to say that in the sense that there was no preconstruction review permit requirement.

 There were other requirements in terms of notifying the State and getting approvals.
- Q. Okay. But in terms of just the requirement to apply for and obtain a construction permit, there was no such requirement during operations in Bennington?
 - A. I believe that to be true.
- Q. Would you also agree that there was no construction permit requirement during the time that ChemFab initially relocated to its North Bennington facility in 1978?
- A. Again, with the caveat that there were other requirements in place, but yes, in terms of the -- the preconstruction review of the new source review requirements of the Clean Air Act, which weren't adopted until the 1977 Clean Air Act amendments and implemented in the 1970 rules by the State of Vermont, yes.
- Q. And let's -- let's talk about those other requirements. You state that despite the lack of a

construction permit requirement prior to 1979, "such sources were not exempted from regulation." Correct?

A. Correct.

- Q. Do you think that Mr. Flechas claimed otherwise in his report?
- A. Just off the top of my head, I can't recall the specific statements that Mr. Flechas said with regard to the pre-1979 compliance, but just sitting here recalling, the impression I came away with from his report was the suggestion that ChemFab had always been in compliance with all the requirements of the act.
- Q. Okay. But you don't recall Mr. Flechas opining that -- that the Bennington facility was exempted from regulation prior to 1979, do you?
 - A. No, I don't recall that.
- Q. All right. You also state that -- let me find where we are on the page for a moment. So second to last paragraph in your report on page 3, and at the end of that paragraph, you state that "Section 5-408 of the 1972 rules required a person constructing new sources to submit information to the Agency about the new sources." Do you see that language?
 - A. I do.
 - Q. That's the only time your report mentioned

Page 94 Section 5-408 of the 1978 rules, correct? 1 2 Α. Correct. '72 rules. '72. Thank you. Have you opined that ChemFab 3 Q. 4 violated Section 5-408 of the 1972 rules? 5 Α. I have not opined that, but it seems self-evident from the fact that there was an assurance 6 7 of discontinuance issued by the State and then modified in 1975 and then in -- modified in 1977. 8 9 And do you believe that that assurance -- the 0. 10 assurance of discontinuance related specifically to 11 violations of Section 5-408? 12 Α. I don't recall without looking back at those -- the 1975 and 1977 orders what the specific 13 14 allegations were, whether they cited 5-408 or not. 15 Does your report identify any specific 16 information known to ChemFab in or prior to 1978 that 17 ChemFab was required to disclose pursuant to Section 5-408? 18 19 I'm sorry. Could you repeat the question? Α. 20 So in connection with Section 5 -- 5-408, that 0. 21 section requires sources to submit information to the 22 agency about new sources, correct? 23 Α. Correct. 24 Does your report identify any specific 25 information that ChemFab was required to submit prior

Page 95 to constructing new sources during the pre-1979 time period that ChemFab did not submit? Α. No, it does not. So when stating that ChemFab was not exempt from regulation and that Section 5-408 requires certain disclosures, that's not a response to any opinion offered by Mr. Flechas or Mr. Hopke, is it? It's in response to the general assertions by Α. Mr. Flechas that the company always operated in full compliance with the State's requirements and authorization -- continuous authorization. But how does Section 5-408 play into that response? The fact that there was no preconstruction Α. permit requirement prior to 1979 doesn't mean that there weren't obligations on sources of air pollution to engage with the agency over whether or not they had to apply for permits or at least share information. That was the -- the point that I'm making. But as we've discussed, Mr. Flechas didn't 0. opine otherwise. He didn't opine that there was no duty to submit information, did he?

MS. JOSELSON:

Objection.

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that the company complied with all permitting requirements from the outset.

- Q. How does citing a provision that you don't claim ChemFab violated have anything to do with your analysis?
 - MS. JOSELSON: Objection.
- A. Because the -- it's -- I don't -- I simply don't know what the exchange was from -- from ChemFab, but there's no evidence that I saw or indicated in the record that there was -- that the company was actively submitting information about its new sources to the agency except in response to the assurance of discontinuance. So it relates in the sense of responding to the assertions that the company operated in full compliance and with the agreement of the -- the State.
- Q. So isn't it fair to say that that sentence regarding Section 5-408 implies that there might have been a violation that you have no basis to actually assert occurred?
 - MS. JOSELSON: Object.
- A. No. No. I'm not trying to imply a violation.

 I'm just noting that there were in fact requirements in place, and if nothing else, the assurances of discontinuance make clear that the company was not

sharing -- fully sharing information except in response to an enforcement response from the State.

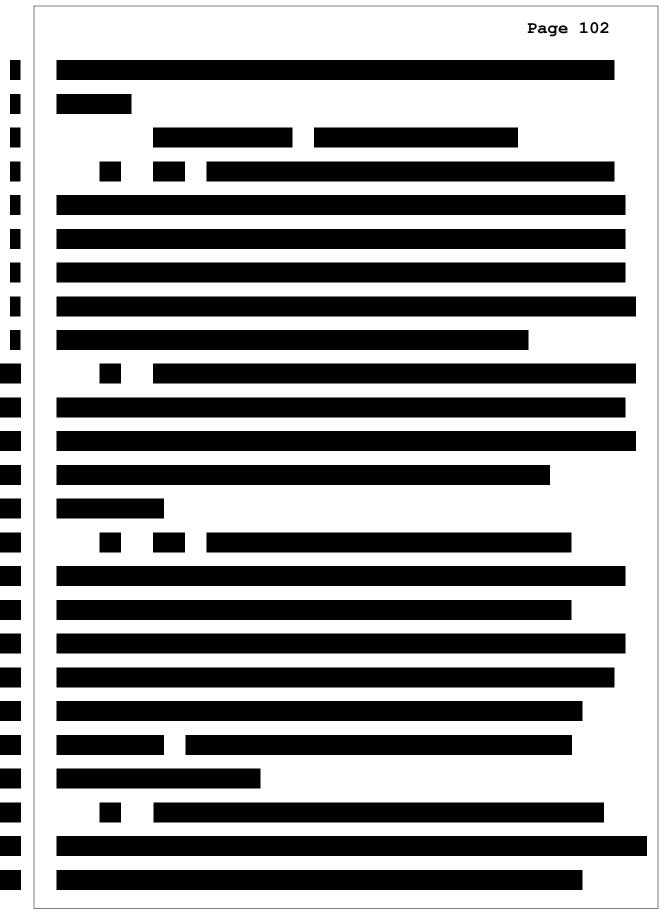
- Q. How do you know they weren't sharing information except in response to enforcement proceedings?
- A. Just by -- by virtue of -- I mean, your point is well taken. I don't know for certain. But the -- there's a strong evidence of the failure to share information with the State by the fact of the 1975 assurance of discontinuance.
- Q. But you testified earlier that you don't know whether the assurance of discontinuance had anything to do with a violation of Section 5-408, correct?
 - A. Correct.
- Q. So let's turn to the 1979 to 1990 time period. You assert in general terms that ChemFab violated the construction permit throughout that period, 1979 to 1990, with respect to six new coating towers built during that time period, correct?
 - A. Can you repeat the question?
- Q. Yeah. Let me find some language here. So your report, page 3, bottom paragraph, and about three sentences in, it states, "As discussed by Dr. Hopke, ChemFab failed to comply with this construction permit requirement from 1979 to 1990, when it finally

Page 98 1 submitted a permit application for the 6 new coating 2 towers it had constructed at the North Bennington facility during that time period." Do you see that 3 language? 4 5 Α. Yes. What was the effective date of the 1979 air 6 7 pollution control rules? I don't know off the top of my head. 8 Α. 9 When was the first of those six new towers 0. 10 constructed? 11 I don't recall off the top of my head. Α. 12 Q. Do you recall whether it was in 1979? 13 Α. I believe it was. Right when they first 14 moved. 15 To your knowledge, when were the rest of those 0. 16 six coating towers constructed? 17 Α. My recollection without looking back through the facts is that there was an additional three that 18 19 were constructed in the -- fairly soon after that and 20 then there was a couple more later, like in the late 21 '80s, early '90s. But I'd have to go back and look at 22 the -- the various documents. 23 I'm sorry. It must -- they applied in 1990. 24 It must have all been before 1990, but I recall some 25 were -- it seems to me that there was a flurry of lines

Page 99 1 that were built in the early '80s and then some -- a 2 couple that were later on. Okay. Now, your report on page 4, in the 3 Q. bottom paragraph, refers to a June 5, 1984, meeting 4 5 between DEC representatives and ChemFab management. 6 I see that. 7 Q. Bear with me for one sec. Okay. Apologies for the dead air. I seem to be missing my exhibit, but 8 9 let me see if we can get by without it, but if not, we 10 can come back to it later. 11 So referring back to that June 1984 meeting, 12 do you recall generally whether that meeting included a tour of ChemFab's facilities? 13 14 I don't recall. Α. 15 Okay. So let's come back to that later today, Q. 16 maybe. 17 And let's turn to the 1990 permit that's been 18 previously marked. 19 MS. JOSELSON: Exhibit 9? Is that what it 20 was? 21 I think so. MR. WEINRAUB: Let me 22 double-check. Yes. Exhibit 9. 23 Α. Oh, here it is. 24 So this is the first construction permit 25 issued to ChemFab for the North Bennington facilities,

Page 100 1 correct? 2 Α. Yes. 3 And on the front page of the permit -- well, Q. 4 strike that. 5 Yeah. Front page of the permit, next to paragraph 1, it states that ChemFab shall install and 6 7 operate the PTFE coating units. Do you see that? Α. I do. 8 9 So even though some of these units presumably 10 had been installed prior to 1990, DEC is directing 11 ChemFab to install and operate those units, correct? 12 Α. Correct. 13 0. And DEC knew that those units had previously 14 been installed, right? 15 Α. Correct. 16 The permit conditions address -- well, strike 17 that. 18 The permit was granted subject to various 19 conditions; would you agree? 20 Α. Agreed. 21 And those conditions included the use of 22 catalytic abators? 23 Α. Yes. 24 Would you agree that the permit conditions generally relate to control of odor and visible 25

	Page 101
1	emissions?
2	A. No.
3	Q. What
4	A. No.
5	Q. What other how would you amend that
6	statement?
7	A. I it's hard to speak generally about the
8	the nature of a complex air treatment system. There's
9	a whole that would deal with a whole array of
10	pollutants from particulate matter to volatile organic
11	compounds.
12	



- Q. So if we could turn to page 4 of your report and the second paragraph from the bottom. Make that the third paragraph from the bottom. It states at the end of that paragraph, "DEC's awareness of the operations did not excuse ChemFab from the permit requirement, and the failure to obtain construction permits was a serious violation that could have subjected ChemFab to substantial penalties." Do you see that?
 - A. Oh, yes, I see that. Yup.
- Q. Now, Vermont DEC knew when the towers were constructed; wouldn't you agree?
 - A. Yes.

- Q. And Vermont DEC knew when ChemFab filed its permit application in 1990, correct?
 - A. Yes.
- Q. So this was not a situation where the regulatory agency's limited resources prevented it from learning the relevant facts in terms of the violation that you've asserted, correct?
- A. I'm not understanding which violation you're suggesting that I asserted.
- Q. You've asserted that ChemFab committed a serious violation of the permitting requirements by not

Page 104 obtaining a construction permit until 1990 for the six towers constructed over the prior ten years, right? Α. Correct. And Vermont DEC had all the information to make that determination itself in terms of when the towers were built and in terms of when the application was filed, right? Α. Yes. If Vermont DEC considered the timing of ChemFab's permit application to be a serious violation that warranted substantial penalties, it had the authority to impose those penalties, correct? Α. Yes. But DEC did not initiate any enforcement proceedings, right? MS. JOSELSON: Object to the form. Α. Specific to the context of these questions in which you're suggest- --Q. Yes. -- talking about the operating permit in that period of time in the '80s -- I'm sorry. I lost the -my train of thought. That was a good clarification of my -- my 0. poor question, so let me start over.

With regard to the timing of -- of ChemFab's

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Page 105 1 permit application in 1990, given the fact that towers 2 had previously been built, Vermont DEC did not initiate a notice of violation regarding those issues, correct? 3 Α. Correct. 4 5 And Vermont DEC did not impose any penalties regarding those issues? 6 7 Α. Correct. 8 Instead, Vermont DEC issued the construction 0. 9 permit for the six new towers? 10 Α. Correct. 11 And that was within Vermont DEC's discretion? Ο. 12 Α. Yes. 13 Q. And Vermont DEC is charged with protecting 14 human health and the environment, correct? 15 Α. Correct. 16 Is that what you tried to do when you were DEC 17 commissioner? 18 Α. Yes. 19 Do you have any reason to think that DEC 20 officials were any less committed to that principle in 21 the 1979 to 1990 time period? 22 Α. I have a couple of questions about what 23 occurred during that time frame at the department. 24 is the degree to which they focused sufficient 25 resources on understanding the nature of the emissions

from the ChemFab plant in light of the nature of the chemicals used, the impacts on employees of the facility, and the near continuous set of complaints.

The second set of questions I have relate to the engagement of elected officials in communicating to the agency that they were concerned about the impacts of the regulatory requirements on the company's willingness to stay in Vermont.

So both of those questions for me call into question why the State did not take a stronger regulatory action.

- Q. So do you believe that during this 1979 to 1990 time period Vermont DEC did not fulfill its obligation to protect the health and the environment of Vermont citizens?
- A. In retrospect it's quite clear with 20/20 hindsight that had ChemFab proactively identified and -- the nature of the emissions and proactively applied for appropriate air pollution control equipment and that had the State implemented that through its permits and regulations, that a significant amount of pollution could have been avoided that has resulted in long-standing contamination in North Bennington that I'm sure we all find regrettable.
 - Q. Okay. So putting 20/20 hindsight aside and

focusing only on the timing of the permit application vis-à-vis the construction of the towers, is there any indication that Vermont DEC considered that to be a significant violation?

MS. JOSELSON: Object to the form.

- A. I do recall some of the inspections raising questions about the -- what -- whether the company should be required to get permits, but there's not a lot. I would agree that there's no clear assertions by the State that there was a significant violation.
- Q. And is there any indication in the regulatory record that DEC officials believed that the construction permit process was needed to provide them access to information regarding ChemFab's facilities?

MS. JOSELSON: Object to the form.

- A. Not in the record, no, that I saw.
- Q. So turning now to the 1998 time period and to your report at page 5. So you've referenced ChemFab's construction of two new coating towers without a construction permit in 1998, correct?
 - A. Correct.
 - Q. And that resulted in a \$2,500 fine?
- A. \$2,500 fine, yes. I believe -- is -- I'm just clarifying. Is that what you said? Because that's the number I recall.

- Q. Yes. 2,500. So I'm on page 5 of your report. First full paragraph at the top, and the last sentence. You state that "The penalty imposed by DEC was minor, but, as Dr. Hopke pointed out, penalties for failure to obtain a construction permit for new sources can be severe." Do you see that?
 - A. I do.

- Q. Do you disagree with the \$2,500 penalty imposed by Vermont DEC on that occasion?
 - A. Yes.
 - O. On what basis?
- A. On the basis of the past history of the company of failure to apply for permits or to give notice when they were constructing towers in the past and the fact that they had applied for a permit and knew how to apply for a permit and -- so there's no question that -- that they knew what the requirements were and then chose not to fulfill them.
- Q. Did Vermont DEC act within its authority in imposing a \$2,500 penalty?
 - A. Yes.
- Q. What factors does Vermont DEC take into account when deciding what penalty to impose?
- A. They take two large categories of factors.

 One relates to the economic benefit of the violation

obtained by the violator or alleged violator, and the second is the gravity of the violation. And the gravity of the violation is informed by a variety of other subfactors and criteria, including the seriousness of the harm and risk to public health, the extent and duration of the violation, the degree to which the violation undermines the integrity of the regulatory program, and the past history of noncompliance.

- Q. Do you know whether Vermont DEC applied those criteria in determining what penalty to apply in this case?
- A. I assume that they did, because it was -- it's been a matter of policy for many years, but I do not know for certain that they did.
- Q. So you have not seen any documentation explaining their analysis of those -- of those elements, gravity and economic benefit?
- A. Correct. Actually, I -- I -- there may have been a reference in the -- in the record, a memo from Chris Jones, suggesting that the company did not get an economic benefit.

MR. WEINRAUB: Let's mark Exhibit 10.

(Deposition Exhibit No. 10 was

marked for identification.)

Page 110 BY MR. WEINRAUB: 1 2 Is Exhibit 10 the memo that you referenced a Q. 3 moment ago? Α. Yes. 4 5 0. So you have seen this document before? 6 Α. I have. 7 Looking at page two of the memo -- my mistake. Q. 8 Let's turn back to page one. In the middle of the first full paragraph, and I'm starting partway through 9 10 a sentence, it states, "all parties agreed that there 11 was no evidence that ChemFab had started operation of 12 either tower prior to the issuance of the air pollution 13 control permit." Do you see that language? 14 I do. Α. 15 Is that something that could reasonably be 16 taken into account under the gravity prong? 17 Α. Yes, it could. I would note, though, that 18 the -- the public policy underlying the nature of the 19 preconstruction requirement is to avoid the 20 construction of these types of equipment, to avoid the 21 kind of pressure in regulatory agencies that occurs

preconstruction is to have the permit in place before

once a company's made a substantial capital investment

in a project that then becomes a significant economic

burden on the company. So the purpose of the

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the construction occurs. So it's -- while it's mitigating, it's only slightly mitigating that they had not actually operated the facility.

- Q. So it would not have been a significantly more substantial violation to operate those new towers for years without a construction permit?
- A. It would have been substantially more grave in terms of the gravity of the violation had they done it for years, but simply turning on the -- the -- operating the equipment for a short period of time would have been slightly worse, but not substantially. The real violation of the intent of the preconstruction requirement really goes to the fact of the construction of the towers without preapproval.
- Q. If we could turn now to page two of that same memo. And at the end of the carry-over paragraph, the last few sentences state, "Mr. Tilgner said that it was necessary for the company to move forward quickly in order to fill the contract for fabric for Saudi Arabia and that when they contacted the Air Division they believed that we had given them a waiver of the need to obtain a permit prior to installing the new -- the two towers. Mr. Tilgner said that he understood now that there was a misunderstanding, and he acknowledged that they were in violation of the construction permit

requirements of the Air Pollution Control Act." Do you see that?

A. I do.

- Q. Could Vermont DEC have taken that explanation into account under the gravity prong?
- A. They -- they might well have taken his apparent apology or acknowledgment into account.
- Q. You say "apparent." Are you doubting the sincerity of the statement that was made?
- A. No, I'm not doubting the sincerity of it. I was describing it as an apparent apology.

 Acknowledgment is the actual words that he used.
- Q. And when Mr. Tilgner refers to a misunderstanding, do you have any reason to dispute that there was a legitimate misunderstanding on the part of Mr. Tilgner mistakenly believing that the construction permit application had been waived in light of the time frame to ramp up for this -- for this manufacturing run?
- A. I do have -- nothing to do with Mr. Tilgner's credibility but simply the circumstances -- the nature of the circumstances where there was a substantial new investment and product and contract that was trying to be fulfilled, the nature of the conversations between ChemFab and the governor all suggest that the company

was pushing hard to get a waiver or to move past any regulatory obligations in their haste to get the project under way.

- Q. Earlier you testified in connection with the gravity prong that -- that you disagreed with the \$2,500 penalty, correct?
 - A. (Witness nods head).
- Q. One of the reasons was the company's prior construction without a construction permit and the fact that they knew how to do a construction permit and they didn't do it. Do you think that Mr. Tilgner's statement that this was actually a misunderstanding rather than a deliberate course of action to -- to act without a necessary permit is something that Vermont DEC could legitimately take into account?

MS. JOSELSON: Object to the form.

- A. I think they could take it in -- into account, certainly, but a mere statement post hoc is not sufficient to overcome the broader context of this violation.
- Q. And as a result, regardless of that explanation, Vermont DEC imposed a \$2,500 penalty, correct?
 - A. Correct.
 - Q. And the memo states towards the bottom, "Mr.

Spinosa and Jones proposed that ChemFab pay a penalty of \$2,500 to reflect the seriousness of the permitting violation as regards the integrity of the air pollution control program." Do you see that?

A. I do.

Q. So would you agree that Vermont DEC took the integrity of the program and the requirement of construction permits into account when setting that \$2,500 penalty?

MS. JOSELSON: Object.

- A. I think the statement speaks for itself, that they -- they did. And this is a memo, I believe, that was drafted, yes, by Chris Jones, so it's his -- his impression that this was significant and that he agreed with Mr. Spinosa that it was in fact a significant penalty.
- Q. And Mr. Spinosa and Mr. -- Mr. Jones had the opportunity to actually sit down and directly interact with the players on the ChemFab side, correct?
 - A. Correct.
 - Q. And you have not had that opportunity?
- A. Yes. No, I did not. Nor did I have any contact with the governor, who apparently was interested in their decision.
 - Q. And so do you have any basis to say that

Vermont DEC got it wrong and that the \$2,500 penalty was inadequate?

- A. Yes. As I said, the -- the very nature of the violation, the construction of a new set of operating lines to build a new product, without getting preapproval, knowing and having past experience with the obligation to get that approval, suggests to me something that goes straight to the integrity of the regulatory program and should have been given a more substantial penalty. And also it's not clear to me given the number of days that would have been associated with this penalty how they could possibly have limited the penalty to only \$2,500.
- Q. Did Vermont DEC abuse its discretion in setting the penalty at that level?
 - A. No.

- Q. Did Vermont DEC act arbitrarily or capriciously in setting the penalty at that level?
- A. No. I mean, that's a legal conclusion, but I'm -- I'm using those words in the -- you know, the ordinary sense that they're intend- -- I assume that they were intended, that it was not -- they clearly had a set of information and context and facts that they relied upon to make their decision, and they did at least assess some level of a penalty.

- Q. And the fact that you would have landed differently on the gravity prong doesn't necessarily mean that the regulators in charge at that time got it wrong, does it?
- A. Wrong is a subjective term, but I accept that they were in those seats and I was not.
- MR. WEINRAUB: I think this might be a good point for a break, and I'm fine to make it either a ten-minute break or a lunch break depending on what people want to do.
- MS. JOSELSON: Should we go off the record?

 THE VIDEOGRAPHER: Going off the record at

 13 12:25.
- 14 (A lunch recess was taken.)
- THE VIDEOGRAPHER: We're back on the record at
- 16 1:34.

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- 17 BY MR. WEINRAUB:
 - Q. Okay. Ready to proceed, Mr. Mears?
- 19 A. Yes.
 - Q. Okay. Now that we've had lunch, let's talk about objectionable odors. So if we could look at your report at the bottom of page 5 and top of page 6. And in the carry-over paragraph and towards the end of the paragraph, there's a reference to over 100 documented violations. Do you see that?

Page 117 I do. 1 Α. 2 Q. What's the basis for that number, over a 3 hundred? The -- the complaints. The various complaints 4 Α. 5 that were purported. Okay. And so is that the 60 or so complaints 6 7 identified by Dr. Hopke plus the additional 42 8 complaints referenced in your report? 9 Α. Correct. 10 Is it your opinion that each one of those 11 complaints constitutes a distinct violation? 12 Α. No. It's an overstatement in my report. 13 Q. Are you able to estimate the number of 14 violations that you believe occurred? 15 I'd have to go back and -- and look through Α. 16 and see how many of the same complaints occurred on 17 each day and which ones were verified or corroborated, 18 so not off the top of my head, no. 19 Do you know whether Dr. Hopke has performed Q. 20 any analysis along those lines? 21 Not that I have seen. 22 And just so I'm clear, have you yourself Q. 23 performed any analysis like that that you just don't 24 recall, or have you not performed that kind of 25 analysis?

Page 118 1 Α. I have not performed that analysis. 2 Is that an analysis that you ever performed Q. while working at Vermont DEC? 3 4 Α. No. 5 MR. WEINRAUB: Let's mark Exhibit 11. (Deposition Exhibit No. 11 was 6 7 marked for identification.) 8 BY MR. WEINRAUB: 9 Do you recognize Exhibit 11 to be the 1972 air 10 pollution control rules? 11 Α. I do. 12 Q. Actually, before we proceed, let me make sure I didn't already mark this before. 13 14 MS. JOSELSON: Not today. 15 MR. WEINRAUB: Not today? Okay. My memory is 16 playing tricks on me. 17 Q. So let's stick with Exhibit 11, and let's turn to Section 5-241. And subsection 2 under Section 5-241 18 19 is titled "Odors." Do you see that? 20 Α. I do. 21 Does that subsection contain the regulatory 22 definition for offensive odors? 23 Α. Yes. 24 And are you generally familiar with that 25 definition?

Page 119 1 Α. Yes. 2 Q. Has that --I'm sorry. I hesitate just briefly because I 3 Α. 4 can't recall if that's changed in recent years, but 5 yes, this is clearly the -- the regulation in place in 1972. 6 7 Okay. And you -- you anticipated my next 8 question, which is, As you sit here, do you know 9 whether this regulatory definition is substantially 10 similar to the definition that exists today? 11 My recollection is that it is, but I wouldn't 12 be certain without looking at the current regulations. 13 Q. So under the 1972 rules, to meet the 14 regulatory definition, an odor would need to be deemed 15 objectionable by a specific percentage of exposed people, correct? 16 17 Α. Correct. 18 And the percentage that's required depends in Q. 19 part on the sample size? 20 Α. Yes. 21 And so for a sample of 20 people or more, at 22 least 15 percent of those people would have to deem the 23 odor to be objectionable for it to satisfy that 24 regulatory definition? 25 Α. I think you just repeated what was in the

Page 120 statute -- I mean the regulation. 1 2 That's what -- I'm trying to Yeah. essentially paraphrase and make sure I'm understanding 3 what the -- what the regulation is. 4 5 Α. Yes. So is my encapsulation of the regulatory 6 7 language so far, so good? 8 So -- so far, so good. Α. 9 0. And then if the -- if you have fewer than 20 10 people in your sample, am I correct that you need to 11 have at least four people that are not from the same 12 household? 13 Α. Correct. 14 And in that sample that's more than four but 15 less than 20, at least 75 percent of that sample would 16 have to deem the odor to be objectionable? 17 Α. Correct. 18 Ο. And are those the criteria or are those 19 substantially similar to the criteria that you would 20 need to apply in reviewing the complaint record to 21 determine how many distinct objectionable odor 22 violations occurred? 23 I mean, there's two things. I'd want to Α. 24 confirm what the specifics are of the regulations in

place at the relevant time frame, but yes, and to look

at the number of people exposed and -- and whether they're, you know, in the same family or not -- or in the same household or not.

Q. And at least during the period that the 1972 rules were in effect, you would need to apply those criteria to each instance of odor complaints, correct?

Let me -- let me try to make that a little more clear.

You'd need to -- you'd need to talk to people exposed on the same day, right?

- A. That would be the easiest, but spread out over time, even, if you had -- you know, within a relatively contiguous amount of time you had a substantial number of people all complaining of -- of odors, that would be relevant to determining whether or not there had been a violation.
- Q. Would the source of the odor need to be consistent if you were looking at a contiguous period of time of longer than one day? So, for example, if on Tuesday you have a complaint of odor during the point where a particular tower is being run and on Wednesday a different tower's being run, could you talk to people exposed during those two days and aggregate them together to determine whether there was an odor violation?

MS. JOSELSON: Object to the form.

- A. Yes. Because the -- the prohibition relates to the whole facility, not just a particular unit.
- Q. To your knowledge, is there any limit on the contiguous period of time that you can aggregate together in that way?
- A. I am not certain what the past practice or guidance documents might have been developed within DEC to try to constrain the potential open-endedness of that. I would assume it would be a reasonableness standard. And as I described earlier, I mean, that's one of this -- the complexity in proving these cases is one of the reasons that agencies frequently do not take an enforcement action limited solely to a question of -- of odor complaints.
- Q. Does your report quote or summarize the criteria for determining -- determining objectionable odor under this regulatory provision?
 - A. No.
- Q. Does Dr. Hopke's report quote or summarize these criteria?
 - A. No.
- Q. If you can turn to page 6 of your report.

 Middle of the page under "Visible Air Emission

 Exceedances." There's a sentence that reads, "The 1998 and 1999 inspections made it clear that odor and

Page 123 1 visible emissions were continuing." Do you see that? 2 Α. I do. 3 Q. And there's a citation to inspection reports by Philip Etter dated February 12, 1998, and April 13, 4 1999? 5 Yes. 6 Α. 7 MR. WEINRAUB: Let's mark Exhibit 12. 8 (Deposition Exhibit No. 12 was marked for identification.) 9 10 BY MR. WEINRAUB: 11 Feel free to take more time to read it if you 12 want, but I'll -- I'll preview my question for you, 13 which is, Is Exhibit 12 the February 12, 1998, 14 inspection report referenced on page 6 of your report? 15 Α. Yes. 16 And could you turn to the last page of this Ο. 17 exhibit. 18 Α. Yes. 19 And there's a Section V, "Findings," and then 20 finding number 4 states, "We did not determine that 21 Chemfab was emitting objectionable odors beyond the 22 property line of the company during this inspection"? 23 Α. Yes. 24 So at least during the 1998 inspection, would 25 you agree that no objectionable odor violation was

Page 124 1 noted? 2 By Mr. Etter, yes. Α. So is it accurate to say that that report 3 Q. 4 makes it clear that odor and visible emissions were 5 continuing? Yes, it does. Under Section V.1., it makes it 6 7 clear that they were emitting significant visible 8 emissions when they first arrived. 9 But focusing on the word "odor," though, does 10 the 199- -- does the 1998 report support that statement 11 with respect to odor? 12 Α. Not in a concrete way, but he definitely -- he 13 acknowledges and notes that there were odors at the 14 facility. He just couldn't attribute them to the 15 ChemFab plant. 16 And not all odors constitute violations 17 of the air pollution control rules, correct? 18 Α. Correct. 19 The permit conditions that were operative 20 beginning with the 1990 permit require ChemFab to take 21 reasonable precautions to prevent the discharge of 22 objectionable odors beyond the property line; would you 23 agree? And we can turn to the exhibit if you need. 24 I -- I agree. If you don't mind, I wouldn't Α. 25 mind looking at the permit.

O. Sure.

- A. It's Exhibit 9. Yes. I see that condition number 7 states that they shall make -- take reasonable precautions.
- Q. Is it possible for precautions to be reasonable at the time they're taken even if they subsequently don't prove to have been a hundred percent effective in preventing odor?

MS. JOSELSON: Object to the form.

- A. It might be a reasonable effort. Whether or not that satisfies the obligation to continue to alter the operations or find the source of the -- the odors and then to modify the activities or install new pollution controls is a -- is a different question. It might be reasonable in a time-limited way. It's not reasonable over a long-term period, like 20 or 30 years.
- Q. Are you generally familiar with odor surveys that ChemFab commissioned during the 1980s?
- A. Yes. I was -- I mean, I'm not familiar -- I didn't read all those documents, but I'm familiar that there was an assessment done.
- Q. And you're aware that those odor surveys were performed by DuPont?
 - A. Yes.

Page 126 1 0. And that DuPont recommended certain steps 2 to -- to mitigate odor? I don't recall what the recommendations were. 3 Α. I just recall reference to a survey by DuPont. 4 5 MR. WEINRAUB: Let's mark Exhibit 13. (Deposition Exhibit No. 13 was 6 7 marked for identification.) 8 BY MR. WEINRAUB: 9 0. Have you seen this document before? 10 I have. Α. 11 And if you'll turn with me to the last page 12 and the final paragraph, it states, "The Air Division's 13 position has been that while some limited interim steps 14 can be taken by Chem Fab (and have been) to abate odor 15 emissions, such as improving fume capture into the 16 control equipment, significant capital expenditures should not be made until the nature of the hazardous 17 18 air contaminant problem (if any) is better understood." 19 Do you see that? 20 Α. I do. Are you generally aware that ChemFab was 21 22 prepared to make capital improvements at this time but 23 that DEC preferred to wait until further emissions 24 analysis had been conducted?

MS. JOSELSON: Objection.

- A. Well, there was certainly an implication in this document, but I wasn't aware of that in terms of other specific information.
- Q. Let's switch topics to -- to abators. One of the violations asserted in your report is failure to maintain abator temperature; is that correct?
 - A. Correct.

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- Q. What is your understanding of how catalytic abators work?
- A. I don't actually know how catalytic abators work.
- Q. Do you have an understanding as to how the operating temperature of a catalytic abator affects its efficacy?
- A. I have assumed without knowing that the higher the temperature, the more destruction of pollution occurs and the cleaner the emissions.
- Q. And do you have an understanding as to whether that's a linear process or some other sort of curve in terms of effectiveness in relation to temperature?
 - A. I do not.
- Q. So, you know, in this case ChemFab's abators were meant to be operated at 600 -- 600 degrees

 Fahrenheit or above, correct?
 - A. That is my understanding.

- Q. Do you have any understanding as to whether, you know, the effectiveness of catalytic abators falls off a cliff if you're at 599 degrees or whether -- you know, whether that would make a material difference in efficacy?
 - A. I do not.

- Q. At page 6 of your report, in the bottom paragraph, you note that inspections in 1998 and 1999 showed that temperatures were below the 600 degrees Fahrenheit required by the permit, correct?
 - A. Correct.
- Q. And those temperatures were 590 degrees and 580 degrees, respectively. So my question is, Do you have any understanding as to whether those deviations below 600 degrees had any material effect on the operation of the abators?
- A. I assume that they -- that the regulators and the scientists who chose the 600 degrees Fahrenheit had a reason for doing so and that there was a loss of effectiveness below that, but that's an assumption. I don't have any personal knowledge of how the abators work or whether or not the nature of that violation was material in terms of the relationship to the amount of emissions.

I would note that one of the -- the issues

that comes out through the record is that there was a fair amount of confusion that continued through the '90s about the ability of the catalytic abators to remove -- remove the chemicals and how -- and whether they were maintained up correctly and -- or replaced appropriately and which -- which pollutants they actually removed. The entire period of time that the State and ChemFab were discussing the abators, there is a fair amount of disagreement and confusion about what the appropriate treatment method is.

Q. One reason the company used abators is that the permits required them to use abators; isn't that true?

A. It is true. But the -- the way that the permitting process works is that the state permit writers rely upon the application, the applicant, to identify the source of the -- the kinds of contaminants that are occurring and the best means of treatment of those contaminants and so would have relied heavily on ChemFab.

Now, there would have been some exchange, as you can see in the record, between ChemFab and the state permit writers over what the appropriate method is, but ultimately it's ChemFab's responsibility to identify and apply for the appropriate treatment.

- Q. Do you have any understanding as to whether the abators were intended to remove PFOA or APFO from ChemFab's emissions?
- A. It seems relatively clear that ChemFab did not choose its pollution control equipment based on any concerns about PFOA or -- or other related chemicals that might be resulting from its process, so no, I don't think that they chose the treatment based on concerns about PFOA.
- Q. And do you have any opinion as to whether abators are effective in removing PFOA or APFO?
 - A. Yes.
 - Q. What is your opinion?

A. No.

- Q. It is your opinion that they are not effective in removing PFOA or APFO?
 - A. Correct.
- Q. So to the extent that allowing the abator temperature to fall to 590 degrees Fahrenheit and 580 degrees Fahrenheit as noted in the two inspection reports, those violations, if they were violations, would have no bearing on emission of PFOA or APFO, correct?

MS. JOSELSON: Objection.

A. I don't know if they would or would not have had any effect. I have to assume that there -- at higher temperatures there might have been greater removal levels, again, based on my common understanding of pollution control equipment. I would -- I would also note that the purpose of this portion of my report really go, again, to refuting statements that were made that are very strong statements that Mr. Flechas made that the State was in -- approved of what ChemFab did, that ChemFab was operating in full compliance and with the cooperation of the State, and this is just one example of a way in which even under the clearly inadequate controls that ChemFab had, that they weren't even operating those consistently with the requirements

in their permit.

- Q. If I understand your testimony correctly, your opinion is that abators are categorically ineffective at removing PFOA and APFO from a plant's emissions; is that accurate?
- A. Categorically in the sense of it's self-evident that they were not. Now, the extent to which they removed some portion of PFOA or other related constituents I'm -- I really -- I don't know and don't have an expert opinion about.
- Q. Do you have any opinion as to whether operating abators at 590 or 580 degrees as opposed to 600 degrees had any material impact on any PFOA or APFO emissions from the ChemFab plant?

MS. JOSELSON: Objection.

A. The -- I have an opinion that typically conditions like a 6- -- or temperature -- minimum temperature requirement for abators are based on the -- the minimum acceptable removals that are necessary, you know, under the operation of that equipment, so I understand that there was some effect of going below 600 degrees, but I really don't have an expert opinion about that. I don't know how these -- this piece of equipment operates or what the, you know, 10- or 20-degree difference would make on its effectiveness

generally, much less with regard to PFOA.

- Q. So as you sit here, you have no opinion as to whether these asserted violations had any impact on PFOA or APFO emissions at ChemFab's plant, correct?

 MS. JOSELSON: Objection.
- A. The challenge I'm just having is the way you phrase the question with "any impact." I have an opinion that there may have been an impact. Again, assuming that the 600-degree limit was selected by experts for a reason, I assume that it may have had an effect on the effectiveness of it, but beyond that assumption, I don't have any expert knowledge or expertise with regard to the operation of these kinds of abators.
- Q. And your assumption that the 600-degree
 Fahrenheit requirement implies some drop-off in
 efficacy, that relates primarily to the chemicals that
 the abators were intended to remove, does it not?
- A. I don't know what chemicals they were designed to remove and whether or not it was -- typically they're not designed for, like, a specific chemical atom or molecule. They're designed to deal with categories and sometimes multiple categories. Often pollution control equipment removes -- will destroy both particulate matter and -- and remove volatile

Page 134 organic chemicals and a broad family of volatile 1 2 organic chemicals, like toluene and benzene and others, so I just don't know the -- the nature of these 3 particular abators and what families of chemicals or 4 5 pollutants they might have been intended to remove. 6 And again, to make sure I understand, is it 7 your opinion that the abators used in Bennington and 8 North Bennington had no significant impact in reducing 9 any APFO or PFOA emissions? Same objection. Asked and 10 MS. JOSELSON: 11 answered at least three times. Objection to the form. 12 THE WITNESS: Should I answer? 13 MS. JOSELSON: Yup. 14 So my response is that the -- I apologize. Α. Ι 15 thought I understood the question, but do you mind 16 repeating it? 17 Q. Let me -- let me try to start over and Sure. 18 I'll -- you know, I'll assume the same objections 19 apply. 20 Am I correct that your opinion is that the use 21 of abators in the Bennington and North Bennington 22 facility would not have had any significant impact in 23 reducing any emissions of APFO and PFOA? 24 MS. JOSELSON: Objection. 25 Α. It's the -- it's the "any" in terms of

significant. It clearly did not effectively remove PFOA, but whether it had some effect, whether it removed some portion of -- of those -- that family of chemicals, I just don't know.

- Q. And so to be clear, I'm not asking you to definitively opine that there was zero effect, but if you -- if you don't know whether there was any effect, can you say with any confidence that operating 10 or 20 degrees below 600 degrees Fahrenheit made any appreciable difference in APFO or PFOA emissions?
- MS. JOSELSON: Same objection. Asked and answered. I think we're probably on question number ten of the same subject matter.
- A. Yeah. I just -- I don't -- I don't have enough technical expertise with regard to this type of pollution control equipment to have any sense of what that change in temperature -- how material that would be and how substantial.
- Q. Okay. Okay. Let's change tacks and discuss hazardous air contaminants. And if you could turn to your report at page 7. In the first paragraph under heading 3, you state that Vermont hazardous air contaminant guideline- -- well, strike that.

In the first paragraph under heading 3, you state that "the Vermont hazardous air contaminant rule

Page 136 went into effect in 1981." Do you see that? 1 2 Α. I do. And you further state that the 1981 rule 3 Q. "placed the burden on the source to identify hazardous 4 5 air contaminants that meet the definition in Section 5-101 subparagraph 26"? 6 7 Α. Correct. 8 0. Let's take a look at the 1981 regs. 9 MR. WEINRAUB: And this will be Exhibit 14. 10 (Deposition Exhibit No. 14 was 11 marked for identification.) 12 BY MR. WEINRAUB: 13 Q. So turning first to -- to that definition, 14 5-101 subparagraph 26, which is on page 3 of the exhibit. 15 16 I'm sorry. Which -- which definition? 17 Q. This is the definition of hazardous air contaminant. 18 19 Got it. Α. 20 And so this definition states that "'Hazardous 0. 21 Air Contaminant' means an air contaminant for which no 22 ambient air quality standard has been adopted and which 23 in the judgment of the Secretary, taking into account 24 its quantity, concentration or physical, chemical or 25 infectious characteristics, causes, or contributes to,

air pollution which may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness." Did I read that correctly?

A. Yes.

- Q. Am I correct in understanding that definition to say that, among other things, to meet the definition of a hazardous air contaminant, the contaminant must cause or contribute to air pollution?
 - A. Yes.
- Q. Let's turn to the definition at subsection 5 of air pollution. And subsection 5 states that "'Air Pollution' means the presence in the outdoor atmosphere of one or more air contaminants in such quantities, and duration as is or tends to be injurious to human health or welfare," and the definition continues.

Did I read that portion of the definition correctly?

- A. Yes.
- Q. Am I correct in understanding that under the regulatory definition of air pollution any health hazards must be associated with the presence of a contaminant in the outdoor atmosphere?
- A. Yes. That's the nature of -- of an emission is that it's emitted into the atmosphere. It doesn't

mean that the harm needs to occur in the atmosphere.

- Q. So you would not, then, agree with me that Vermont's hazardous air contaminant rules relate to exposures to contaminants that are present in the outdoor atmosphere?
- A. They include that but are not limited to harm that occurs in the outdoor atmosphere.
- Q. What is your basis for saying that they're not limited to harms that occur from exposure to contaminants in the outdoor atmosphere?
- A. Well, assuming you mean by -- one means by "atmosphere," which I think this does, the -- the ambient air that surrounds us all, then that's too limiting. The harm may be that -- that the contaminant is -- you know, falls into the soil or into surface water or groundwater and has an impact, and that would still constitute a hazardous air contaminant.
- Q. What is your basis for saying that -- that a contaminant where the only hazards relate to its eventual presence in soil, surface water, or groundwater could still be a hazardous air contaminant?

 MS. JOSELSON: Objection to the form.
- A. I didn't say that it would be solely -- those harms would be solely limited to that, but I suppose you might have a chemical that would somehow magically

not be harmful in the atmosphere and yet be harmful in groundwater due to some chemical reaction with water, I suppose, but most likely in my experience what happens is these chemicals are toxic all the way through their life, but when they're -- the place where they're readily measured and found tends to be in the soil or water, and so the fact that you didn't measure it when it was in the air doesn't mean that it didn't come from the air or that it isn't considered a hazardous air contaminant.

- Q. Can you give me any example of a substance that is not hazardous in the outdoor atmosphere but that is nevertheless considered a hazardous air contaminant because of subsequent hazards associated with its presence in other media?
- A. No. And I feel like we're getting -- going down a rabbit hole. I mean, you asked me the question of whether or not an air contaminant needed to be something that was limited to its presence in the outdoor atmosphere, and what I was saying was that it's not limited to a contaminant that is only present in the outdoor atmosphere, but if it comes to land in the soil or water, for instance, it could also have been a hazardous air contaminant.
 - Q. Can you cite any authority supporting that

Page 140 interpretation of air pollution under the Vermont regulations? I suppose I could if I did some research. Α. Not off the top of my head. 0. Looking at the definition of air pollution, it specifically refers to the presence in the outdoor atmosphere of one or more air contaminants, correct? Α. Correct. And it refers to the presence of those contaminants in the outdoor atmosphere in such quantities and duration as is or tends to be injurious, correct? Α. That's what it says. Based on this definition, how could a Q. contaminant's presence in the outdoor atmosphere below levels deemed injurious constitute air pollution,

MS. JOSELSON: Objection to form.

regardless of downstream effects in soil or

- A. There's nothing in this definition to suggest that the injury has to occur only while the pollutant is in the atmosphere. The injury could occur after the pollutant has accumulated in the soil or water.
- Q. Are you familiar with EPA's National Air Toxics Assessment program?

groundwater?

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Page 141 Generally. Not specifically in the sense of I'm not deeply familiar with it, but I know that it exists. MR. WEINRAUB: Let's mark Exhibit 15. (Deposition Exhibit No. 15 was marked for identification.) BY MR. WEINRAUB: I'll represent to you that this comes from Q. EPA's website. And if I could ask you to look at the first sentence under the heading "What is NATA?" states, The National Air Toxic Assessment, NATA, is EPA's ongoing review of air toxics in the United States. You see that? Α. I do. And turning to the top of the second page, there's a heading that says "What NATA is not." And in the second paragraph under that heading towards the end of the paragraph, it states, "NATA only considers health effects from breathing these air toxics. ignores indoor hazards, contacting or ingesting toxics, and any other ways people might be exposed." Do you

A. I do.

see that language?

Q. Is it fair to say that EPA's National Air

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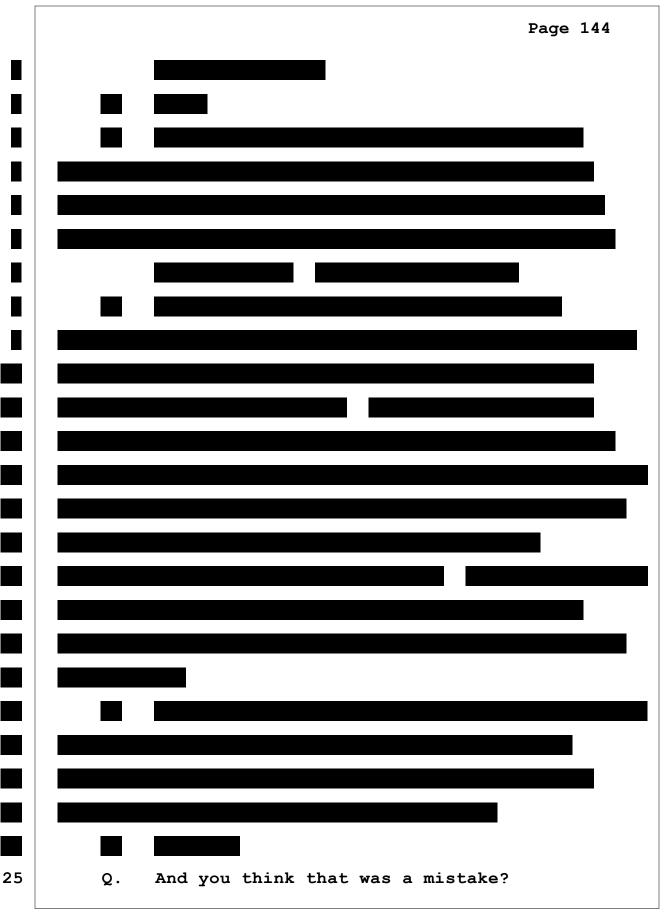
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Toxics Program considers only inhalation hazards and not hazards that might result from contaminants formerly present in the air but subsequently present in other media?

- A. I -- the -- it's not a -- this is not a regulatory entity. It's -- it's doing a set of assessments, and so it's distinguishing the toxicity associated with breathing from other types of toxicity for the purposes of, you know -- you know, targeting its scientific review and analysis. It's not an interpretation of the breadth of -- of the national air pollution toxics program as implemented by EPA in the states. Certainly it's not, you know, a -- an interpretation that's relevant to understanding what Vermont's definition of hazardous air contaminant means.
- Q. Would you agree that NATA does what it does to inform EPA's administration of its hazardous air pollution rules?
 - MS. JOSELSON: Object to the form.
- A. I assume that it is -- and would hope that it's one of the major sources of information that the EPA permitting programs and enforcement programs rely upon in determining the relevant, you know, effects of -- of air emissions when inhaled, but it's not --

	Page 143
1	there's nothing that would suggest to me that it's
2	intended to somehow limit the breadth and reach of the
3	authority of the EPA to regulate air toxics.
4	MR. WEINRAUB: Let's mark Exhibit 15 oh,
5	16. Apologies.
6	(Deposition Exhibit No. 16 was
7	marked for identification.)
8	BY MR. WEINRAUB:
9	Q. Have you seen this document before?
LO	A. I saw reference to this document, but I have
L1	not seen the actual document.
12	Q. Do you recognize the name Bill Bress, Ph.D.?
13	A. I do.
L 4	Q. He is an environmental toxicologist with
L5	Vermont's Department of Health?
L 6	A. He is. And as I noted earlier, highly
L7	respected.
L8	



- A. It was obviously a mistake in retrospect. Now we know that, you know, surrounding the site are very high levels of PFOA in the soil and groundwater and that the most likely source of those -- of that contamination was from ChemFab's emissions, air emissions. Secondly, that he didn't understand or appreciate that he didn't have the full spectrum of potential contaminants to -- to evaluate.
- Q. So Dr. Bress is a toxicologist whom you've spoken very highly of today, correct?
 - A. Yes.
 - Q. You've worked with him personally?
 - A. Yes.

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- Q. You had glowing words to say about him at the beginning of today's deposition?
 - MS. JOSELSON: Object to the form.
- A. Glowing. Well, he's highly respected, and I respect him.
- Q. His apparent understanding of definition of hazardous air contaminant aligns more closely with my interpretation than with yours; wouldn't you agree?
- A. No. I don't see any interpretation whatsoever in here of hazardous air contaminant.
- Q. Do you see any reference to potential hazards of any contaminant in any media other than in the

ambient air?

- A. No.
- Q. And you think it was a mistake that Dr. Bress focused only on hazards related to the presence of contaminants in the ambient air and not in other media, correct?
 - MS. JOSELSON: Object to the form.
- A. Yes. And I'll note from my personal experience with -- with Dr. Bress that he was very concerned about -- ultimately and primarily about public health impacts. He would not have been in the business of drawing arbitrary lines between whether or not the -- the chemicals or toxic substances were in the air or in the soil or in the water. He would have been concerned ultimately about the impacts on public health, so I see here only that he probably limited his assessment to what he was asked to do, which is what he -- review of the information about what was present in the air.
 - Q. And who do you think asked him to do that?
- A. I assume that it was to Harold Garabedian, to which he directed his opinion and report.
- Q. During your time at Vermont DEC -- strike that.

Would you be able to point me to any document

like this in the regulatory record in this case or that crossed your desk while you were commissioner of Vermont DEC where Bill Bress or any other toxicologist evaluated air emissions under the hazardous air contaminant rule based on potential hazards associated with exposure in medias other than the ambient air?

MS. JOSELSON: Objection.

A. I don't recall a specific instance of that.

It wouldn't surprise me. Again, for Dr. Bress and for the folks at the Department of Environmental

Conservation, they might at some point in a -- in the context of implementing a regulation and program try to sort out and clarify which regulatory program was the appropriate one to apply in terms of -- of how to regulate it and which vehicle, whether it was a hazardous waste or clean air or clean water or drinking water program, but their first and primary interactions at this level, you know, substantive level about the technical scientific piece, would have been to assess ultimately what were the ultimate effects on public health.

They would not -- they would be working well beyond their own particular programmatic and jurisdictional limitations to try to figure out what were the nature of those problems, and then in an

instance like this, if there were other programs that should be involved or engaged, then they would broaden the technical and scientific inquiry. It would be up to the lawyers later on in the process to determine what to do with that information and how the agency should apply it in terms of the regulatory programs.

- Q. But in this e-mail, which is focusing specifically on air toxics, we don't see any of that occurring, do we?
 - MS. JOSELSON: Object to the form.
- Q. We don't see any focus beyond exposures in the ambient air?
- A. His -- his statement here is -- is definitely responsive to an apparent question of what are the hazard levels in the ambient air, and he says he doesn't see anything above the hazard levels.
- Q. And as you note, there are other regulatory programs to regulate hazards in other media, such as drinking water or groundwater or soil, correct?
 - A. Correct.
- Q. To your knowledge, has Vermont ever set hazard-limiting values for the presence of PFOA or APFO in the ambient air?
 - A. For PFOA, no.
 - Q. Or APFO?

Page 149 1 Α. No. 2 To your knowledge, has EPA ever set Q. hazard-limiting values for PFOA or APFO in the ambient 3 4 air? 5 Α. Not to my knowledge. To your knowledge, has Vermont DEC ever 6 7 required a company to test its emissions for PFOA or 8 APFO? I don't know that, but I would be surprised --9 Α. 10 I would not be surprised if they weren't looking at 11 emissions across the state, potential sources, and 12 engaged in a discussion with those sources about 13 whether or not they needed permit limits for it, but I 14 don't -- I don't have any personal knowledge of that. 15 That's just an assumption. 16 In the absence of any hazard-limiting values 17 for the presence of APFO or PFOA in the ambient air, do you have any understanding as to how Vermont DEC would 18 19 evaluate emissions tests showing that PFOA or APFO were 20 being emitted? 21 Α. Yes. 22 What's your understanding? Q. 23 They would have a dialogue with the Department Α. 24 of Health toxicologist; they would be looking at the

nature of the -- the toxicity, the potential sources

or -- not -- potential recipients who would be vulnerable to it, the pathways for exposure; and they would be also engaged in conversation with EPA, which, of course, has much greater scientific resources; they'd be looking at other states like California, to the European Union; for literature reviews; and then they would be making their best judgment based on all that information on whether there should be a numeric limitation based on risk or a prohibition or to require further study.

- Q. To your knowledge, nothing like that has occurred to date in connection with emissions of PFOA or APFO in Vermont, correct?
- A. I just -- would be surprised if there was not a very active conversation that's been happening over the last two or three years around that very topic, but I have not been personally involved in those, so I cannot say one way or the other.
- Q. Let's turn to page 5 of your report. I'll warn you in advance I'm pretty sure I got the page wrong. Let me find out where I'm supposed to be. Make that page 8 of your report.

At the end of the first paragraph, it states,
"Had the Vermont DEC been informed by Saint-Gobain that
it was emitting APFO from the North Bennington Plant,

Page 151 1 the Department had the authority to require the company 2 to perform the analysis required by the Hazardous Air Contaminant Rule." Do you see that? 3 4 Α. I do. 5 And would you agree that that authority would 6 depend, at least in part, on the judgment of the 7 secretary of ANR as to whether APFO or PFOA were 8 hazardous air contaminants? 9 MS. JOSELSON: Object to the form. 10 Α. The secretary is informed by his or her, you 11 know, scientific staff. 12 Q. And let me -- that was a poorly teed-up 13 question. Apologies for jumping around, but let's go 14 back to the 1981 regs and to the definition of 15 hazardous air contaminant --16 Α. Yeah. 17 -- which is paragraph 26. Q. Α. 18 Yup. 19 MS. JOSELSON: Exhibit 14, are we? 20 MR. WEINRAUB: Yes. 14. 21 Α. Yup. 22 So subparagraph 26 defines hazardous air Q. 23 contaminant to mean "an air contaminant for which no 24 ambient air quality standard has been adopted and which 25 in the judgment of the Secretary, taking into account

its quantity," et cetera, then no longer quoting, may reasonably be anticipated to result in increased mortality or illness.

Do you see that?

A. I do.

- Q. So part of the criteria for whether an air contaminant constitutes a hazardous air contaminant is whether the secretary judges there to be a health hazard, correct?
- A. You're using "health hazard" to kind of summarize that phrase at the end about its physical, chemical characteristics, et cetera, but yes, that's fundamentally -- the primary concern around hazardous air contaminants are the impacts on human health, although impacts on the environment may also be considered.
- Q. Okay. And we have a disagreement about whether the risks to the environment or health needs to relate to the presence in the outdoor atmosphere, but putting that aside, ANR has the ability to add a contaminant to its hazardous air contaminant list and remove all doubt about whether this definition applies, does it not?
 - MS. JOSELSON: Object to the form.
 - A. It does, yes.

- Q. And you believe that Saint-Gobain and ChemFab should have spontaneously identified PFOA or APFO as hazardous air contaminants prior to 2002, correct?

 MS. JOSELSON: Objection.
- A. I'm not sure what you mean by "spontaneous," and certainly it wasn't their obligation to list it. That's up to the department to list a contaminant, but it is the obligation -- the entire Clean Air Act and the implementation by the State of Vermont relies upon companies that in the first instance know what their process is, know what chemicals they're using, and have the capacity and ability to determine how best to treat those, to identify those, and, where they have questions or concerns, to dig deeper and to do the research necessary for the secretary to be able to make those types of determinations.
- Q. So turning back to your report on page 8, just to reread that quote at the end of that first paragraph, you state that "Had the Vermont DEC been informed by Saint-Gobain that it was emitting APFO from the North Bennington Plant, the Department had the authority to require the company to perform the analysis required by the Hazardous Air Contaminant Rule." Correct?
 - A. Correct.

- Q. And yet to this day in 2018, Vermont has not added PFOA or APFO to its list of hazardous air contaminants, correct?
 - A. As far as I know, they have not.
- Q. Do you have any reason to think that learning of APFO emissions in 1997 would have resulted in DEC or ANR identifying APFO as a hazardous air contaminant?
 - A. Yes.

- Q. What's the basis for that understanding?
- A. Given the information that has come out and came out, you know, in the years following that about the health impacts of APFO and PFOA on human health, I have no doubt that they would have given consideration to listing it as a hazardous air contaminant by virtue of the definition that you read earlier, you know, from the 1981 rules about chemicals that -- or contaminants that may cause an increase in mortality or serious reversible -- or irreversible illnesses.
 - Q. Then why haven't they done so?
- A. As of -- well, there's two reasons. One is the major source of air emissions of APFO or PFOA, ChemFab, closed in 2002 and hasn't been present. Secondly, until just two or three years ago, the State of Vermont was not aware that the air emission of PFOA could cause such substantial harm to public health.

Q. If ChemFab or Saint-Gobain had disclosed in the late 1990s that any emissions of APFO or PFOA were occurring, Vermont DEC wouldn't have had that health information, would they?

MS. JOSELSON: Object to the form.

A. There has been -- as -- as is played out nationally and in the state, there's a growing awareness that there was a fair amount of information from DuPont and even from ChemFab, you know, from its own health study, that there were unexplained health impacts of exposure to chemicals, now most likely determined to be PFOA, that would have raised serious red flags for the Department of Health and for the Agency of Natural Resources, and at a minimum there would have been an obligation placed on ChemFab to the extent it had continued operating to pay for extensive additional analysis and study of that.

So whether they would have actually listed it or they simply would have required additional analysis or they would have participated in a national conversation about the nature of the risks, it's pure speculation, but there's ample information to suggest that had ChemFab at the time identified and notified the State of the nature of these chemicals and the potential risks, that there would have been additional

regulatory action.

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- Q. You predicted my next question again, which is, You are currently engaging in pure speculation about what Vermont DEC would have done had it been informed of those emissions in 1997, are you not?

 MS. JOSELSON: Object to the form.
- Α. I don't think I said pure speculation, but I did say speculation, and it would be informed speculation in that I have observed over the years that when health and safety and environmental regulatory agencies are presented with information that suggests significant potential health risks, that they will require additional analysis and engage with the regulated entities, with other states, and with EPA to understand those risks and determine the appropriate regulatory action, which could -- could have included listing it as a hazardous air contaminant. But I don't know because ChemFab did not in fact notify or pursue the risks associated with the chemicals it was using or the unexplained impacts on the health of its employees or the -- the persistent public complaints around odor and nuisance.
- Q. Do you have any information -- my apologies. I didn't mean to interrupt.
 - A. Nuisance was the last word I said.

- Q. Do you have any information that ChemFab attributed any health effects among its employees to exposure to PFOA or APFO?
 - A. No, I do not.

Q. Okay. Let's test your theory about what would have happened in this counterfactual world. Are you aware that Vermont DEC was asked on at least two occasions in 2016 whether residents who have inhaled fumes were at increased risk?

MS. JOSELSON: Object to the form of the question. Object to the rudeness implied in the question. If you want to reask the question in a more respectful way, that would be much appreciated.

MR. WEINRAUB: I did not -- I did not intend to be disrespectful, and I don't think I was, but -- but I won't argue the point and I will repeat it.

- Q. Are you aware that Vermont DEC was asked on at least two occasions in 2016 whether residents who had been exposed to fumes were at increased risk as a result of breathing the fumes during the period that ChemFab was operating in North Bennington?
 - MS. JOSELSON: Object to the form.
- A. No, I was not aware of that round of -- two rounds of questions.
 - MR. WEINRAUB: Let's mark Exhibit 17.

Page 158 1 (Deposition Exhibit No. 17 was 2 marked for identification.) BY MR. WEINRAUB: 3 So I take it you have not seen this -- this 4 Q. 5 document before? 6 No, I have not. 7 This is an e-mail chain involving some names Q. that I think we've discussed earlier. Chuck Schwer, 8 9 that's someone that you are familiar with? 10 Α. Yes, I am. And I'm seeing Sarah Vose. 11 the -- the toxicologist at the Department of Health 12 that I referenced earlier that replaced Bill Bress. 13 Q. And I think you also referred to Alyssa 14 Schuren at one point? 15 She was at this time the commissioner of Α. 16 I know all these folks. And Richard the department. 17 Spiese works for Chuck in the -- the waste division, 18 and Lori Cragin works with Sarah at the Health 19 Department. 20 So Chuck's e-mail - this is dated February 28, 21 2016 - states, "Here is the list of questions from 22 Friday's meeting. We should start filling in the 23 answers." 24 And then if you could turn to question number 25 18. I'm looking at the wrong document. Hang on one

	Page 159
1	moment. I've got the right one. Question number 18:
2	"Was there an inhalation danger while the plant was
3	operating" or "when the plant was operating?" Do
4	you see that?
5	A. I do.
6	Q. And then just turning quickly to the second
7	instance.
8	MR. WEINRAUB: This will be Exhibit 18.
9	(Deposition Exhibit No. 18 was
10	marked for identification.)
11	MS. JOSELSON: I'll just note we've been going
12	about an hour, so you decide when you're ready.
13	MR. WEINRAUB: Sure. Let's do this exhibit
L 4	and then maybe take a break.
15	BY MR. WEINRAUB:
16	Q. So this is an e-mail chain where the the
17	top e-mail is dated March 4, 2016, with some of the
18	same personnel. Do you see that?
19	A. I do.
20	Q. Then if you turn to the back page, in the top
21	carry-over paragraph, there's a well, let me back
22	up.
23	Bottom of the first page, there's an e-mail
24	from Gail Mauricette to Chuck Schwer?
25	A IIm-hum

Q. And Ms. Mauricette identifies herself as a resident who lives on Polygraphic Lane in North Bennington. And then on the carry -- at the end of the carry-over paragraph, she says, We have municipal water. I know that the priority now has to be testing wells, but all of us in the area that spent years inhaling the smoke from the ChemFab plant are concerned about the long-term health effects, especially on our children who grew up smelling the chemicals. Should we all have blood work done?

Do you see that?

A. I do.

Q. To your knowledge, has Vermont DEC or ANR ever indicated that there was reason for concern among residents exposed only via inhalation during the time that ChemFab was operating?

MS. JOSELSON: Object to the form.

A. Now we're outside of the scope of the documents I reviewed as part of the deposition, but -- and you're asking a question that kind of goes beyond my opinion, but I -- I do recall that there has been a concern about -- that's been expressed by a variety of people, and I don't know exactly who, but including public officials, about whether or not people who worked at the plant may have been exposed in ways that

caused them to have health impacts. I don't recall whether it had to do with inhalation or other types of exposure.

But I -- I also recall that some of the question and concern related to people who also smoked cigarettes and worked in the plant and that there may -- they may not have cleaned their hands before smoking and that there may have been some exposure through that pathway, but really I'm -- I'm out -- out of my comfort level in terms of I don't have a specific document or anything I'm relying on. That's just my recollection from general discussions.

- Q. Okay. That's fair enough. And putting aside these specific e-mails, do you have any knowledge of any statement by Vermont ANR to the effect that there's any particular concern related to inhalation exposure by nonemployees?
- A. I am not aware of that. I would be surprised if they were crossing any concerns off the list of things to be worried about, but I understand that the primary concern has been the -- the groundwater present in people's water.

MR. WEINRAUB: Okay. Why don't we take a ten-minute break.

THE VIDEOGRAPHER: Going off the record at

	Page 162
1	2:47.
2	(A recess was taken.)
3	THE VIDEOGRAPHER: We're back on the record at
4	3 o'clock.
5	BY MR. WEINRAUB:
6	Q. Let's take a look at Dr. Hopke's merits report
7	real quick. That's Exhibit 2.
8	A. Yes.
9	

Page 163 And then one of the documents cited in the 1 0. 2 parenthetical that follows is a June 17, 1985, Environmental One report. Do you see that? 3 Α. I do. 4 5 Have you read Dr. Hopke's deposition 6 transcript? 7 Α. No, I have not. 8 Okay. Do you have any knowledge as to whether Q. 9 that 1985 Environmental One report was submitted to 10 Vermont DEC in 1985? 11 I do not. 12 Q. Do you have any basis to dispute that by 1985 Vermont DEC was informed that ChemFab's process 13 14 included use of PFOA as a constituent of the PTFE 15 dispersion? I have -- I have no basis to say one way 16 17 or the other. MR. WEINRAUB: Let's mark Exhibit 19. 18 19 (Deposition Exhibit No. 19 was 20 marked for identification.) 21 BY MR. WEINRAUB: 22 Have you seen this document before? Q. 23 No, I have not. Α. 24 So the document is titled "Trip Report," and 0. 25 next to "Participants," one participant is identified

Page 164 as Michael Nelson of Vermont ANR. Do you see that? 1 2 Α. I do. Do you know Michael Nelson? 3 Q. 4 Α. I do not. 5 0. So it refers to an inspection on July 12, And if you look at the second paragraph under 6 7 the heading "General Description." 8 Α. Yes. 9 14 And then the paragraph ends, "This material is 15 not considered to be hazardous." Do you see that? 16 Α. I do. 17 Can we turn back to page 8 of your report? Q. And in the top paragraph, second sentence, it states, 18 19 The New York Department of Environmental Conservation 20 became concerned about emission of APFO, in 21 parentheses, the ammonium salt of PFOA, from similar 22 Teflon coating processes in 1997. 23 Do you see that? 24 Α. I do. 25 Q. And then your report references a memo dated

Page 165 March 21, 1997, found in the Vermont DEC files. 1 2 Α. Yes. First of all, do you have any information as 3 4 to whether ChemFab was informed of New York DEC's 5 concerns in 1997? Well, A, the presence of this in the DEC file 6 7 suggests that someone was aware of it in the 8 department. I also recall - I can't remember the 9 date - that there was an exchange in which someone at 10 DEC referenced the -- the New York plant and issues 11 with PFOA there, but I can't recall the specifics off 12 the top of my head. It may be later in the report. 13 Q. So the 1997 report, that is an internal DEC 14 memo; is that correct? 15 No, I don't believe so. I believe that the 16 March 21 -- is that the one you said? March 21? 17 Q. The March 21, 1997, memo. Yes. 18 Α. I believe --19 Apologies. Was that a memo from Vermont --Q. 20 from New York DEC to Vermont DEC? 21 My recollection is that it was an 22 internal memo within New York DEC, but it had obviously 23 been sent to somebody at Vermont DEC. That's my 24 recollection. I mean, we could pull it up and look at

it, but that's what I recall.

Page 166 1 0. Do you have any information as to whether the 2 memo was ever shared with ChemFab? I don't know. 3 Α. ChemFab was still operating in Vermont in 4 5 1997, correct? 6 Α. Correct. 7 After receiving this information regarding 8 New York DEC's concerns, did Vermont DEC ask ChemFab to 9 test its emissions for PFOA or APFO? 10 MS. JOSELSON: Object to the form. 11 As far as I know, they did not. Α. 12 MR. WEINRAUB: Let's mark Exhibit 20. 13 (Deposition Exhibit No. 20 was 14 marked for identification.) 15 BY MR. WEINRAUB: 16 Have you seen this document before? 0. 17 Α. Yes. 18 And this is a September 20, 1999, memo from Q. 19 Philip Etter to Chris Jones, correct? 20 Α. Correct. 21 And if you'll turn to the final paragraph on 22 page 2, Mr. Etter's report states, "I am uncertain that 23 any of the testing done at Chemfab has specifically 24 tried to identify perfluoroisobutylene (CAS number: 25 382-21-8) or ammonium perfluorooctanoate." Do you see

Page 167 1 that? 2 Α. I do. And ammonium perfluorooctanoate is APFO? 3 Q. Α. Correct. 4 5 0. Mr. Etter goes on, If not, I recommend that, 6 during future testing, we test for these specific chemicals which are mentioned in a March 21, 1997, memo 7 from the New York DEC as being problematic from a 8 9 toxicity standpoint. 10 Do you see that? 11 I do. Α. 12 0. And at no time after this September 20, 1999, 13 memo did Vermont DEC ask ChemFab to test its emissions 14 for PFOA or APFO, correct? MS. JOSELSON: Objection. 15 16 I actually don't know that to be true one way or the other, but as far as I know, they did not. 17 18 mean, there's certainly nothing in the records I 19 reviewed that suggested that they had. Whether or not 20 there was informal exchanges around that or other 21 documents that I haven't reviewed, I just don't know. 22 If Vermont DEC knew in 1997 of New York DEC's Q. 23 concerns about APFO emissions from a Teflon plant and 24 didn't ask ChemFab to test its emissions for APFO, why 25 do you think that Vermont DEC would have required

Page 168 ChemFab to test its emissions for APFO if ChemFab had told them that that was a possible component of their emissions? MS. JOSELSON: Object to the form. Α. I'm -- I lost the premise of the question. Ιf ChemFab had --So earlier on I had asked you if -- if Vermont Q. DEC had known that APFO was being emitted from the ChemFab plants, would it have taken any action. Α. Right. I understand. And so in 1997 Vermont DEC was informed that New York DEC had concerns about PFOA emissions from a Teflon plant, right? (Witness nods head). Α. And yet they didn't ask ChemFab to test its 0. emissions for PFOA. Why do you think that DEC would have taken a different approach if ChemFab had identified PFOA as one of its potential emissions? I see what you're saying. Well, as -- as a Α. first point, you know, it's clear that the -- the department should have, in hindsight should have, followed up on this with the -- with the company. So that -- that's the first point. The second point is that -- that failure to do

that doesn't mean that ChemFab fulfilled its

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obligations to independently identify and raise the question and to pursue it with the department.

- Q. ChemFab's obligations under the hazardous air contaminant rule depend on the assumption that ANR's secretary would consider PFOA or APFO to meet the regulatory definition of a hazardous air contaminant, do they not?
 - MS. JOSELSON: Objection.
- A. I mean, it's ultimately up to the secretary of the Agency of Natural Resources to designate things.

 That's their responsibility. But who petitions them to do that, it could be the company petitions them; it could be an out- -- external entity; it could be the staff that make the recommendation.
- Q. But putting aside, you know, the HAC list, the judgment of ANR's secretary is explicitly built into the definition of a hazardous air contaminant, correct?
 - A. Correct.
- Q. And so unless the secretary would consider a substance to be a hazardous air contaminant, the hazardous air contaminant rules don't apply; isn't that right?
 - MS. JOSELSON: Objection.
- A. If a company has a chemical that they know or should know has the potential to cause human health

risks, they have an obligation to notify the secretary and/or his or her staff of that risk so the secretary can make that determination. They're not -- it's not -- it's not that they have no obligation until the secretary identifies the risk. I mean, if the secretary puts something on the list, then yes, they must respond to that, but the fact that it's not on the list doesn't mean that they are not obligated to know what they're emitting and to assess the risks of that chemical and to make sure that the secretary and his or her staff know what those risks are.

- Q. Is it possible that the reason that DEC did not respond to this information in 1997 and Mr.

 Etter's -- Mr. Etter's recommendation in 1999, is it possible that the reason that they didn't ask ChemFab to test its emissions for PFOA or APFO is that Vermont ANR does not consider PFOA or APFO to meet the regulatory definition of a hazardous air contaminant?

 MS. JOSELSON: Objection.
- A. That's possible as -- it's also possible that they just didn't have the time to get to it, that the memo got lost, that Phil Etter was transferred, that another bigger issue came up and they dealt with that first. There's a variety of reasons why they might not have moved forward with it. As I said, in retrospect,

Page 171 I'm sure if you asked these folks, they -- they would probably say they wished that they had done that additional testing and analysis or, you know, done additional evaluation. Are you familiar with Dr. Hopke's opinion that ChemFab or Saint-Gobain should have used different control technologies to remove PFOA from plant emissions? Yes. I saw that. Α. Q. And specifically Dr. Hopke references scrubbers and wet electrostatic precipitators as alternate technologies? Α. Yes. Do you know what a scrubber is? Α. In a general sense, yes. Do you know how scrubbers work with regard to Ο. removing PFOA from emissions? I don't know. I think it would -- it's a --Α. it's a technology that works best on particulate matter, but I think it assumes that the -- the form, the physical form, of the PFOA would be in particulate matter or attached to particulate matter. Do you know what a wet electrostatic 0. precipitator is?

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- Q. Do you know how that technology works in removing PFOA from emissions?
- A. I don't know specifically how that works. That's a little further afield for me.
- Q. Your report does not address scrubbers or wet electrostatic precipitators, correct?
 - A. Correct.

- Q. Do you have an opinion as to whether ChemFab or Saint-Gobain violated any Vermont regulations by not using one or both of those technologies?
- A. The reason I'm hesitating is I'm not sure quite how to characterize it. There seemed to me to be substantial circumstantial evidence suggesting that large volumes of PFOA escaped the plant and have caused health impacts, and that -- that set of facts, if -- if proven correct, are absolutely -- would be a violation of the air pollution control laws, but I don't have any specific -- you know, it's -- the specific failure to install these particular control technologies is not in and of itself a violation.
- Q. The emission of PFOA in and of itself constitutes a violation; is that your opinion?
- A. The emission of a chemical that causes public health and environmental harm is -- raises a substantial question about whether or not there was a

violation, yes.

- Q. Have you opined in your report to a reasonable degree of certainty that release of PFOA in and of itself constitutes a violation?
- A. I did not make that assertion. Most of my report is really focused on responding to -- to Mr. Flechas' overbroad statements about the degree to which the department knew, comprehended, participated in, gave guidance to, and permitted ChemFab to operate in the way that it did, resulting in the emission of PFOA. That -- that is an overstatement, and that's the main point that I'm trying to make in my report.
- Q. To your knowledge, during your tenure at Vermont DEC, did DEC ever require any companies to use scrubbers or wet electrostatic precipitators?
- A. I don't know specifically, but I -- I would be shocked if we didn't. It's a very common requirement to be put on any industrial facility.
- Q. And what -- do you have any understanding as to what chemicals those technologies are used to remove?
- A. The collection of pollution control equipment you just described remove a pretty broad array of -- of chemicals, including particulate, criteria pollutants like sulfur dioxide and NOx, a variety of toxic air

Page 174 1 pollutants, so -- but I don't know the specifics. 2 And just to -- just to be clear, during your time at Vermont DEC, to your knowledge, did DEC ever 3 require any companies to use those technologies 4 5 specifically to remove PFOA from their emissions? 6 Oh, I'm sure they did not. 7 Are you aware of any company anywhere in the Q. 8 world that was using scrubbers or wet electrostatic 9 precipitators during the period that ChemFab operated 10 in Vermont to remove PFOA emissions? 11 I'm unaware of -- of that one way or the 12 other. 13 MR. WEINRAUB: So I think I may actually be 14 close to done, so I want to propose we take another 15 ten-minute break and I'll just quickly go through my 16 I trust no one would be horribly offended if we 17 made it an early day, so, yeah, why don't we go off. 18 THE VIDEOGRAPHER: Going off the record at 19 3:23. 20 (A recess was taken.) 21 THE VIDEOGRAPHER: We're back on the record at 22 3:34. 23 MR. WEINRAUB: Nothing further from me at this 24 Thank you very much, Mr. Mears. time. 25 THE WITNESS: Thank you.

Page 175 1 **EXAMINATION** 2 BY MS. JOSELSON: Mr. Mears, in the last round of questions, you 3 Q. were asked about Exhibit 20 and whether or not Vermont 4 5 DEC acted in a timely manner to request ChemFab/Saint-Gobain to test for PFOA in its emissions. 6 7 Do you remember that line of questions? Α. Yes. 8 Yes. 9 MR. WEINRAUB: Just note my objection to the 10 form. 11 Do you know how long it was after the date of 12 Exhibit 20, September 20th, 1999, that the company 13 closed its plant in Vermont and moved out of state? 14 My recollection is it was 2002. Α. 15 Could it have been earlier? 0. 16 It could have been. I know that there were 17 discussions in some of the documents suggesting that 18 they were considering moving their operations earlier 19 in discussions with state economic development 20 officials. 21 Did you have anything else you wanted to 22 testify to with regard to the 1997 to 1999 period when 23 Vermont DEC is apparently in communication with the New York DEC regarding testing for -- requiring testing 24 25 for PFOA in ChemFab's emissions?

MR. WEINRAUB: Objection to form.

- I want to thank you for asking that. Α. other thing that I felt like is relevant and it's somewhat uncomfortable to talk about because I have great respect for -- for Chris Jones and for Phil Etter and for Dick Valentinetti and Harold Garabedian, but I do think that -- I wonder given the nature of the other communications that are kind of running in parallel to this that involve Secretary Ripley and the Governor's Office and others whether or not the concerns about the company leaving caused them to go slow in terms of moving forward on the concerns that they'd heard from New York, and I just -- I just don't know what happened informally within the department, what happened back and forth between ChemFab, but the question had been kind of why -- why didn't the State move forward, and I really don't have a great explanation, because in retrospect it seems clear that they should have moved more promptly, but I -- I have to think that there was a broader context that was making it complicated for the regulators to -- to act.
- Q. Regardless of whether the regulators acted in that period or earlier to require ChemFab to do other testing or take other actions, what is the burden on an industry like ChemFab under Vermont's air pollution

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regulatory scheme?

MR. WEINRAUB: Objection to the form.

A. The primary obligation on -- in all of the major pollution laws is on the applicant to identify any pollutants that it's going to be emitting and to propose and recommend ways to control that. The agencies necessarily have to rely on the expertise of the sophisticated companies who are much more familiar with the nature of the chemicals they're using, the chemical process, and what the industry practices are around that, so while ultimately the department or the agency make the decisions on what the permits contain, the -- these statutes and programs are premised on the idea that the State can't be everywhere and know everything and that it relies on a significant level of self-disclosure.

So that's -- that's a major gap that's occurred in this particular situation, and the failure of the State to take stronger regulatory action is not an indication that they approved, and so kind of contrary to -- to Mr. Flechas' report and statements that the State was aware of and cooperated in and approved and permitted the emission of PFOA by the company, it's just -- it's -- that's not the case. It was primarily on the company to identify that risk and

those chemicals and to come up with an appropriate removal system.

Q. And if -- you -- do you recall your testimony in the last hour regarding whether if the PFOA that has contaminated hundreds of wells in the Bennington and North Bennington area were determined to be -- to have originated from ChemFab's operations, then that would be substantial evidence of a violation of Vermont's regulatory laws and -- and rules, can you explain a little bit more what you meant by that?

MR. WEINRAUB: Objection to the form.

A. Yes. If you work -- if one works backwards from the -- the policies and goals stated at the outset of each of these statutes, that are in the legislative history and are captured in the language, which include language like prohibiting the discharge or emission of pollutants that would cause harm to public health or the environment, then the very presence of substantial harm to public health and the environment as, you know, has been found by the State of Vermont as a result of ChemFab's or now Saint-Gobain's emissions is kind of a de facto evidence that the statute purposes weren't fulfilled, and then so working backwards from that, you know, one of the ways in which that should have been fulfilled is that the chemicals should have been

identified and should have been treated and removed, so it's -- given that the company's no longer in operation, it's somewhat of an academic exercise to state whether or not it would have been a violation or not, but it's clearly an overstatement to suggest that they were in compliance with the air pollution control laws of the State of Vermont given that -- the nature of the contamination that's occurred.

- Q. So are you saying that had the company from the outset complied with the requirements of Vermont's regulatory scheme, then they would not have emitted chemicals, including PFOA, that contaminated the environment?
 - MR. WEINRAUB: Objection to the form.
 - A. Correct.
- Q. And what are the obligations on a company once it has made the decision to close shop and move out of state, as ChemFab did in this case, Saint-Gobain, to look back over its conduct during the years it did operate in a state and come forward with information to notify the State that its operations while it was in the state may have caused harm to the environment or to its neighbors?
 - MR. WEINRAUB: Objection to the form.
 - A. Yes. Under -- under the State's waste --

waste laws, it's the -- any company retains an obligation and liability for any harm that it's caused to soil or -- or groundwater or surface water, for that matter, that occur as a result of its emissions and discharges, and so the fact that it stopped operations did not remove it from having an obligation and liability for any -- any harm that it left behind or any chemicals left behind.

So in this case ChemFab/Saint-Gobain had and has an obligation to continue to address the contamination that it was responsible for, and that's, I know, you know, a major focus of the interaction between the State and the company today.

- Q. Are there any other opinions that you'd like to clarify as you expressed them during the course of the depo?
 - A. No. Thank you.

MR. WEINRAUB: And I'll have a few follow-ups starting with the last one first.

EXAMINATION

BY MR. WEINRAUB:

Q. You just testified regarding a company's obligations after moving out of the state to look back over its conduct while it was in the state and inform Vermont regulators of any issues. Did you offer any

Page 181 1 such opinions on that obligation in your report? 2 Α. No. You referenced that those obligations arise 3 Ο. 4 under the waste laws. Did you offer any opinions 5 regarding waste laws in your report? 6 Α. No. 7 Q. Did you offer any opinions in your report under any regulatory program under -- other than the 8 9 air pollution control rules? 10 Α. No. You were asked questions about the period 11 12 after 1999 -- strike that. 13 You were asked about how long after Mr. 14 Etter's 1999 memo recommending emissions testing for 15 APFO before ChemFab closed up shop and left the state. 16 Do you remember that testimony? 17 Α. I do. Do you know whether Vermont DEC after the date 18 19 of Mr. Etter's memo asked ChemFab for any additional 20 information regarding its emissions? 21 I don't recall. Α. 22 You testified that you had some uncomfortable Q. 23 concerns about political issues, communications with 24 the governor, things of that nature. Do you recall 25 that testimony?

A. I do.

Q. Do you have any basis to opine to a reasonable degree of certainty that that was the reason that Vermont DEC did not require ChemFab to test its emissions for APFO or PFOA?

MS. JOSELSON: Object.

- A. No. I mean, beyond what I -- what I stated, which is there's kind of a parallel set of communications involving cabinet-level officials.
- Q. And do you believe that the DEC officials that you referenced and that you hold in high esteem acted in dereliction of their responsibilities in response to those communications?

MS. JOSELSON: Object to the form.

- A. I -- I wouldn't use the word "dereliction," but it's clear in retrospect that they failed to fulfill the promise that we expect of -- of our public agencies that are tasked with protecting public health and the environment to pursue risks where they're notified of some potential risk to human health and the environment, and I -- you know, they -- they share that along with the officials at ChemFab, who also failed in their duty to identify and address those risks.
- Q. If APFO and PFOA are not hazardous air contaminants within the regulatory definition, and I'm

not asking you to accept that, but if you assume it for the moment, would ChemFab have violated its duties by not testing its emissions for those chemicals?

A. Maybe. And I say maybe because it depends on what they knew or should have known, and it depends on what the State would have asked them to do in response to that. If they had -- if the nature of these laws are such that had the company fully disclosed what it knew about the risks or potential risks and the State made an affirmative decision to not act on that, then the company would have done -- would have met its obligations vis-à-vis the regulatory program.

Now, it's a whole different situation, and as is noted in the permits and in the statutes, the failure of a state to regulate or the approval that it gives in the course of a permit to authorize a discharge does not relieve the -- the emitter or polluter or discharger from any liability they have for harm to private property or to personal -- to people's persons, but in terms of their liability and obligations under the regulatory program, had they identified all of the risks and all the information they knew about the nature of their chemicals and the State decided not to act on that, then they would have met their obligations.

Q. You testified that the presence of harmful contaminants in environmental media that can be traced backwards to a plant's emissions inherently demonstrate regulatory violations. Is that a fair encapsulation of your testimony a moment ago?

A. It's a little more specific than I said, I mean, but that's the essence of it, but the -- the difference is it's difficult to know what the regulatory violation would have been, but I'm just going backwards from the point of saying if the purpose of the statutes and of the clean air program at the federal and state level as it is is to protect public health and the environment and to prevent the emission of harmful chemicals, the very presence -- the fact that those chemicals were released through air emissions and caused public health and environmental harm is proof that the regulatory program was not effectively implemented.

Now, you asked the question whether or not that would constitute a regulatory violation, and -- and as over the course of the day we've explored, there are lots of specific ways in which those -- the goal and purpose of the statute have to be translated by the company and the State into actual permit conditions before one can determine whether or not there was a

specific violation, and, of course, that did not happen.

- Q. Is it fair to say that you are operating from the premise that there has to have been a regulatory violation of some sort and that all that remains to be done is to identify which particular regulation was violated?
- A. I suppose so. And we should be clear, too,
 I'm not suggesting that there were not violations at
 the plant or the facility. There -- there were
 violations, and we talked about the full range of -- of
 those kinds of violations, from allegations based on
 odors all the way to the -- the findings that resulted
 in assurances of discontinuance. But with regard to
 the specific emission of PFOA, yes, there would -there are no -- there were no specific violations that
 occurred in terms of PFOA being on a list of regulated
 chemicals or in a permit that was violated.

What I'm suggesting is that the statute itself prohibits the public health and environmental harms that have resulted when caused by air emissions, and if, for instance, the company were operating today, I'm confident given what it has learned that the State would be taking action to require additional treatment or to -- or shut down the facility to avoid the

Page 186 continuation of that harm. 1 2 I believe you testified earlier that regulation of PFOA in air emissions essentially became 3 4 moot after ChemFab moved out of the state. MS. JOSELSON: 5 Objection. Is that a fair summary of your position on 6 Ο. that issue? 7 8 No, I didn't say it was moot, but I was Α. 9 just -- you had asked if there was an explanation for 10 why they might not have already issued a hazardous air 11 pollutant limit now, and I don't know, but I was 12 suggesting that one factor may be the fact that a primary source of PFOA emissions has left the state. 13 14 Could PFOA have continued to be emitted after Q. 15 ChemFab's departure in industrial waste contexts? 16 Absolutely, yes. 17 Q. And could PFOA have continued to be emitted in 18 municipal waste? Waste incineration? Let me specify. 19 MS. JOSELSON: Object to the form. 20 I'm not aware of any municipal Α. I suppose so. 21 waste incineration in -- in Vermont. 22 Could manufacturing facilities other than Q. 23 ChemFab have been emitting PFOA or APFO after ChemFab's 24 departure without the knowledge of Vermont DEC?

Object to the form.

MS. JOSELSON:

A. Yes, that's possible.

MR. WEINRAUB: Okay. Nothing further.

EXAMINATION

BY MS. JOSELSON:

- Q. To your knowledge, has the State of Vermont identified ChemFab as the source of PFOA contamination in Bennington and North Bennington?
- A. Certainly -- I mean, there's different areas of contamination, but I know immediately around the plant there seems to be a high level of confidence that that's a result of ChemFab's operations, yes.
- Q. And that's stated in the consent order that the State reached with ChemFab last year?
 - A. Correct.
- Q. Do you know if the State has identified any other sources of the PFOA contamination in Bennington-North Bennington area that the State of Vermont has identified as the impacted area on its maps?
- A. Not that I know with the one exception that there may have been some spots around the landfill that may -- may be associated with the landfill, but I'm operating on -- on information that's really at this point a year old, so there may have been more recent information about that, so -- but in general the

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1	predominance my understanding is the predominance of
2	contamination as determined by the State of Vermont of
3	groundwater with PFOA is a result of the ChemFab
4	facility.
5	Q. And do you know if the State has identified
6	any industrial entity other than ChemFab who may have
7	deposited PFOA-laden waste in any landfills in the
8	area?
9	A. No.
10	MS. JOSELSON: That's all.
11	THE VIDEOGRAPHER: All set?
12	MR. WEINRAUB: Nothing further.
13	THE VIDEOGRAPHER: Okay. Stand by a moment.
L 4	We are off the record at 3:55. This concludes
15	today's testimony given by David Kruger Mears. Total
16	number of media units was one and will be retained by
17	Veritext Corporation Legal Solutions.
18	Off the record at 3:55.
19	(The deposition concluded at 3:55 PM.)
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ACKNOWLEDGMENT OF DEPONENT
I, DAVID K. MEARS, do hereby certify
that I have read the foregoing transcript of my
testimony taken on 9/24/18, and further certify
that it is a true and accurate record of my
testimony (with the exception of the correction
listed below):
Page Line Correction
DAVID K. MEARS
SUBSCRIBED AND SWORN TO BEFORE ME
THIS, DAY OF, 20
(NOTARY PUBLIC) MY COMMISSION EXPIRES:

CERTIFICATE

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I, Johanna Massé, RMR, CRR, Court Reporter and Notary Public, do hereby certify that the foregoing pages, numbered 5 through 188, inclusive, are a true and accurate transcription of my stenographic notes of the Deposition of David K. Mears, who was first duly sworn by me, taken before me on Monday, September 24, 2018, commencing at 8:58 AM, in the matter of James D. Sullivan, et al., Individually and on behalf of a Class of persons similarly situated v. Saint-Gobain Performance Plastics Corporation, Civil Action No. 5:16-cv-00125-qwc, as to which a transcript was duly Review of the transcript was requested.

I further certify that I am neither attorney nor counsel for, nor related to or employed by any of the parties to the action in which this transcript was produced, and further that I am not a relative or employee of any attorney or counsel employed in this case, nor am I financially interested in this action.

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Johanna Masse

JOHANNA MASSÉ, RMR, CRR

Comm. expires: 2/10/19

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Federal Rules of Civil Procedure Rule 30

- (e) Review By the Witness; Changes.
- (1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:
- (A) to review the transcript or recording; and
- (B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.
- (2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF SEPTEMBER 1,

2016. PLEASE REFER TO THE APPLICABLE FEDERAL RULES

OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

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